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IV

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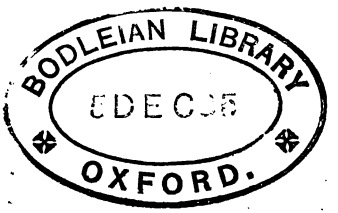
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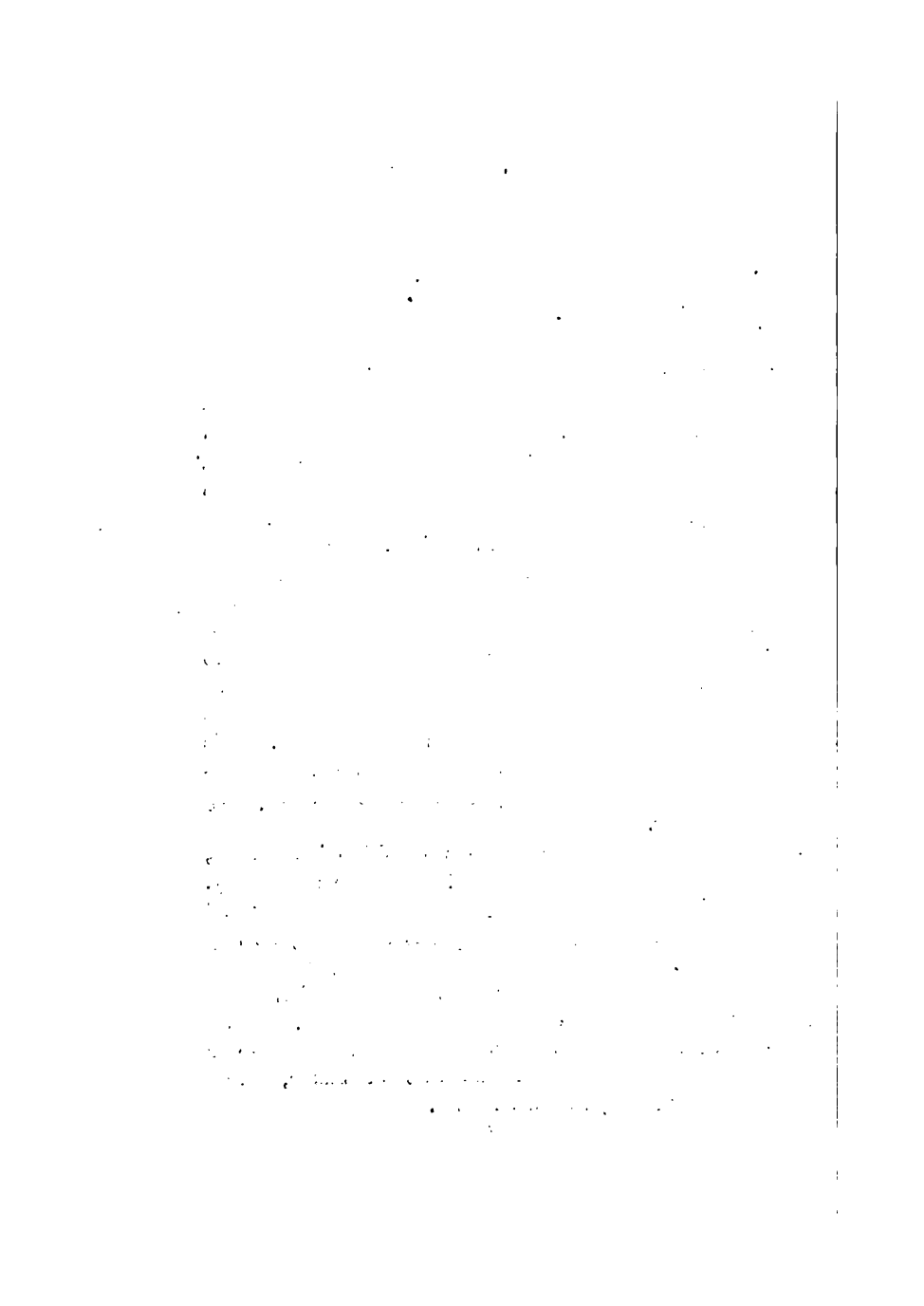
# PREFACE.

THE FOURTH NATIONAL READING-BOOK is constructed on the same plan as the Third. INFORMATION LESSONS comprise Lessons on Animals, on Health, and on Physical Geography. The *Lessons on Animals* are arranged in a systematic manner, so as to form a simple introduction to Zoology. These embrace the Vertebrate animals. The Invertebrates are treated of in Book V. It is hoped that these, while forming interesting and useful Reading Lessons, will tend to foster a more humane treatment of the lower animals.—The *Lessons on Health* are intended to supply useful information on a subject with regard to which our pupils are left too much in ignorance.—The *Lessons on Physical Geography* are descriptive of the easier and more attractive portions of that subject. It is believed that these three series of lessons will be appreciated as being on the subjects best suited for the young at this stage.

The MISCELLANEOUS LESSONS consist of Narrative, Didactic, and Moral pieces, both in prose and poetry. These include Historical and Biographical Sketches; and the Poetical Extracts, as is proper at this stage, are very numerous.

The more difficult words are accented and have their meanings given at the beginning of each lesson. At the end of the book are Lists of Words for exercise in Spelling, and copious Vocabularies of Saxon, Latin, and Greek Roots, with derivatives.



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THE

# FOURTH NATIONAL READING-BOOK.

## THE VOICES OF SPRING FLOWERS (1).

admira'tion.
consequen'tial.
enam'elled.
encirc'ling.
frag'ile, easily broken, delicate.
har'binger, forerunner.
illu'minated, lighted up.
jer'kin, jacket.
magnif'icent.
pecu'liarly.

It was spring—flowers enamelled the ground that had so lately been covered with frost; the tender buds upon the trees were swelling and bursting into life; the young shoots that had for many months been wrapped in a clothing of snow, were putting forth their leaves of freshest green; birds sang on the branches, or flew hither and thither, collecting materials for their nests; the wind blew from the south, bearing on its wings the odour of violets. The glorious sun shone gaily on all around, and nature, responding to the warm influence, sent forth its grateful offering of fresh wild-flowers; the squirrels sprang from tree to tree; and the wood-pigeon, nestling in the branches, cooed softly to her mate, and seemed in her voice of love to speak the promise of summer.

In this scene of loveliness, a little girl wandered forth. She stopped frequently to inhale the scent of the sweet violets, and to cull bright flowers as they rose to view; till, wearied with the load she had gathered, she sat down on a grassy mound to arrange her treasures, and with childish glee chatted to each as it passed through her tiny fingers.

At last she exclaimed: 'What is it that makes flowers so beautiful, and all so unlike each other? I wish they could speak to me, and tell me where they lie hidden all the dark cold winter, when the snow lies on the ground!' While occupied with these thoughts, a dreamy influence rapidly stole over her bright fancy, and sleep fell on her heavy eyelids. She did not know that the spot on which she lay was fairy ground, and if there a favoured being chanced to sleep, the secrets of fairy-land would be revealed to that being.

Now, this little girl was born on a Midsummer Eve, and was therefore peculiarly favoured by the fairies. She was, besides, good, gentle, and true, and of a nature such as the good spirits love to watch over; and as that little girl lay with her arms encircling the flowers, her attendant fairy touched her eyes with her enchanted wand, and she opened them on a scene of unspeakable beauty. A strain of music, softer and sweeter than she had ever before heard, fell on her ear; and astonishment held her in silent admiration. She was not frightened, for all was too beautiful; but wonder and delight so filled her mind, that she could only gaze speechless on the scene around her.

She seemed to be in a vast and brilliantly lighted hall; but yet when she looked steadfastly at the ceiling, there was the sky, with its myriads of stars

looking like a net-work of diamonds—the same sky she so often gazed on from her little bed, but far more blue, and the stars more clear and bright. The walls, too, were ever changing; sometimes they appeared like those of some magnificent saloon, with columns and arches hung with tapestry, and brilliantly illuminated; and again, when she looked, they seemed to wave like tall trees, whose tops almost reached the sky. But the most wonderful thing of all, was the company with which this hall was filled. All around her, as far as she could see, was a multitude of little people, all beautiful and all splendidly dressed, but so small, that she could have covered any one of them with her little hand; some were so tiny, indeed, that she could hardly discern their features. She felt that she could not step without crushing some of them, and so remained lying where she was, only raising herself on her elbow, and looking with great delight on all around her. At last she heard a low sweet voice speaking to her.

'Little girl,' it said, 'you were wishing, but a short time since, that the flowers could speak to you; we are the spirits of the flowers, and have heard and granted your wish. You shall now see some of us singly; and then we will answer what questions you like to ask.'

The fairies now retired for a short distance, leaving a little space round the child, in which appeared, one by one, various little beings, all most beautiful, but yet all differing one from the other. And first there came a slender little figure, clothed entirely in robes of purest white, except that the border of her dress and of her veil were of a light green. She was very beautiful, but *very, very* pale, and so fragile that it seemed as if a breath would have destroyed her. By her side walked a little

fellow, very upright, with rather a consequential air; he was dressed in the old-fashioned style, with his jerkin of purple velvet, and his trunk hose and full sleeves of the same colour, slashed with white. The little girl knew that they were called Snowdrop and Crocus, and she said: 'Snowdrop, what makes you look so pale? Why are you not gay like the flowers that come after you? And why, in spite of this, does every one watch for you, and greet you with a loving welcome?'

And the Snowdrop answered: 'I belong both to the winter and spring, and die beneath the too piercing rays of the summer sun. I have borrowed the whiteness of the snow, from which I rise; while the spring, of which I am the harbinger, has bestowed on me some faint traces of her own beautiful green. Spring's harbinger am I, and therefore do all love me, for all love and welcome the bringer of glad tidings.'

## THE VOICES OF SPRING FLOWERS (2).

**Anem'ones.**
**attired', dressed.**
**compan'ions.**
**con'sciousness.**
**contrib'ute.**
**Frit'illaries.**
**indus'trious.**
**insignif'icant, of little importance.**
**Veron'ica.**

Then the little girl turned, and saw that many others had arrived. On one side were assembled a gay group attired as for a ball, their light robes of purple, and red, or silver-white, were floating on the air—these were the Anemones; and close beside them stood their partners, the Tulips, in gay fancy dresses, striped with many colours; near these last were the Fritillaries, with their short cloaks and caps nodding in the wind, as if going to pay their court to their chief, the Crown Imperial.

'We,' they cried, 'we change not with the times, nor give in to new customs, whether of dress or actions. Loyalty and faith are out of fashion now; and few cherish us, or care to have us in their gardens; but there are still some spots where old friends find a welcome, and there we make our abode.'

'Old friends,' said another voice, and the Wallflower came forward; 'who has a better right to that title than I? And who, except the Ivy, clings so fondly and closely as I do to the relics of the past? To those who will listen to my voice, I tell of times departed; of the great and noble of other days; of mitred abbots and lowly monks; of holy and learned men; of nobles and their serfs; the oppressor and the oppressed, now equal in the grave; and more than this, I speak of a time not far distant, when those who now hear me will be as they; and this is why,

in spite of my humble dress of russet brown and yellow, my perfume is so sweet, and I am sought for and valued by those of thoughtful mind. But here is one will teach you a yet mightier lesson,' and she drew forward a figure like an angel, in robes of the brightest blue.

'Beautiful fairy!' cried the child, 'whence come you? for I know you not. What lesson am I to learn of *you?*'

'Little lady,' replied the fairy, 'but a short time ago I was called "meanest flower among the mean," now few surpass me in beauty; and you, too, may gain a beauty equal, nay, superior to mine.

> From the dust I take my rise,
> Upward glancing to the skies.

Our origin is the same, it depends on you whether our fates be also alike.'

The child heard in silent wonder, and bending her little head with humility to the lesson, turned to where stood a humbler group.

The Dead Nettle was there, with its dull russet dress; and the Valerian and Ground-ivy, clad in lilac; and the Clovers in red, white, and yellow; and Cowslips looking like industrious housewives in brown-holland aprons; and many another flower of the spring; and the Cowslips nodded and curtsied, and said: 'Types are we, little maiden, of the more homely and domestic virtues. Not one of us but has her appointed use; even the insignificant Vetch and lowly Arum supply food to those who, but for them, would have languished and died. All may not possess beauty or talent, but, however placed, all may follow our example—

> None so humble but may bless,
> None too mean for usefulness.'

And now fresh arrivals diverted the child's attention. One little fairy was there, in brightest blue, and with the dimpled face and sunny smiles of childhood. Her name was Eyebright—her *pet-name*, as one of the older fairies said, for she had been originally named *Veronica*. Then there was the Primrose, in her robes of pale sulphur; and the Wood-sorrel, in glittering white; and the elegant ladylike Hyacinth; and the Daffodil, or *Lent Lily*, as the little girl now for the first time heard was her ancient name. But among all these beauties, the little girl missed one—her favoured flower, that she was wont to search for in every hedge-row and field. She looked from side to side in vain, till at last she was attracted by a perfume sweeter than that of any of the gay flowers she had been contemplating; and guided by that, she at last found the spot where a graceful, modest-looking little fairy stood half-concealed in a shady bower.

'Beautiful Violet!' exclaimed the child, 'at last I have found you; all these gay flowers could not satisfy me while you were absent!'

'True,' said one of the older fairies who stood near, 'so certain is it that with every beauty, every grace, the chief charm is wanting where humility is not. There is another fairy nearly related to the Violet, on whom she is almost a constant attendant; for which she is called Heart's-ease, as that always follows modest worth.'

'But,' said the little girl, 'how is it that so long as I have known and loved the flowers in which you reside, I have never before seen you, sweet fairies, or even guessed at your existence?'

'We only make ourselves known to a few favoured mortals,' replied the fairy; 'but know, also, that each flower has an attendant spirit, whose duty it is to guard

and adorn it; every evening we collect the dew that falls, and with it we refresh and renew their bright colours.'

'But what, then, is the dew?' asked the little girl.

'It is the tears of the stars,' replied the fairy, 'that they shed for us, their humble kindred. The stars are the flowers of the sky; we, like you, are children of the earth, and liable to be crushed or injured by every passing storm; and they weep nightly for those among us who have perished during the day. It is our task to contribute to your happiness, and adorn your homes on earth, while in the sky the stars are woven in wreaths of love for you, speaking to you even now with a voice as plain as ours. But it grows late; some of my fairy companions have already drawn within the shelter of their closed buds; even the Hyacinth nods with drowsiness on its stalk, and it is time for you to return home. 'Good night!'—and a chorus of many voices rang out 'Good night!' which was echoed by a soft wind, until the murmur in the distance died away; and after the fairy spell was removed, the sound seemed taken up by the sighing of the wind in the trees, and her fairy dream was carried on. She thought the stars seemed to gaze on her with a loving kindness, and the memory of the beautiful flowers was as a still small voice in her heart, which warmly greeted the sweet impressions of nature's lessons, leading her gentle spirit to 'look through nature up to nature's God.'

Starting, at last, into entire consciousness, she found herself lying on the grassy mound, and her pretty flowers withering by her side. With a sigh for her dying treasures, she rose to return home; and the spirit of her dream watched over her path, and cheered her on her way with many bright and happy thoughts.

## THE RAVEN AND THE OAK.

**bulged, had a hole made in it.** | **mast, acorns.**

Underneath a huge oak tree
There was of swine a huge company,
That grunted as they crunched the mast:
For that was ripe, and fell full fast.
Then they trotted away, for the wind grew high:
One acorn they left, and no more might you spy.
Next came a Raven, that liked not such folly:
He belonged, it was said, to the witch Melancholy!
Blacker was he than blackest jet,
Flew low in the rain, and his feathers not wet.
He picked up the acorn, and buried it straight
By the side of a river both deep and great.
Where then did the Raven go?
He went high and low,
Over hill, over dale, did the black Raven go.
Many autumns, many springs
Travelled he with wandering wings:
Many summers, many winters—
I can't tell half his adventures.

At length he came back, and with him a She,
And the acorn was grown to a tall oak tree.
They built them a nest in the topmost bough,
And young ones they had, and were happy enow.
But soon came a woodman in leathern guise,
His brow, like a pent-house, hung over his eyes.

He 'd an axe in his hand, not a word he spoke,
But with many a hem! and a sturdy stroke,
At length he brought down the poor Raven's own oak.
His young ones were killed, for they could not depart,
And their mother did die of a broken heart.

The boughs from the trunk the woodman did sever;
And they floated it down on the course of the river.
They sawed it in planks, and its bark they did strip,
And with this tree and others they made a good ship.
The ship it was launched; but in sight of the land
Such a storm there did rise as no ship could withstand.
It bulged on a rock, and the waves rushed in fast:
Round and round flew the Raven, and cawed to the blast.

He heard the last shriek of the perishing souls—
See! see! o'er the top-mast the mad water rolls!
Right glad was the Raven, and off he went fleet,
And Death riding home on a cloud he did meet,
And he thanked him again and again for this treat:
They had taken his all, and revenge it was sweet.
We must not think so, but forget and forgive;
And what Heaven gives life to, we 'll still let it live.

## A STORY OF APSLEY HOUSE.

chan'cellor.
convey'ance, handing over.
el'igible, fit to be chosen, suitable.
estab'lishment.
expecta'tions.
haberdash'ery, small wares, as ribbons, tape, &c.
im'plements, tools.
recognised', knew again.
represent'atives.
vet'eran, an old soldier.

One fine autumn day, in the year 1750, as his majesty George II. was taking a ride in Hyde Park, his eye was attracted by the figure of an old soldier, who was resting on a bench placed at the foot of an oak-tree. The king, whose memory of faces was remarkable, recognised him as a veteran who had fought bravely by his side in some of his continental battles; and kindly accosting him, the old man, who was lame, hobbled towards him.

'Well, my friend,' said the monarch, 'it is now some years since we heard the bullets whistle at the battle of Dettingen; tell me what has befallen you since.'

'I was wounded in the leg, please your majesty, and received my discharge, and a pension, on which my wife and I are living, and trying to bring up our only son.'

'Are you comfortable? Is there anything you particularly wish for?'

'Please your majesty, if I might make bold to speak, there is one thing that would make my wife, poor woman, as happy as a queen, if she could only get it. Our son is a clever boy, and as we are anxious to give him a good education, we try every means in our power to turn an honest penny; so my wife keeps an apple-stall outside the Park gate, and on fine days, when she is able to be out, she often sells a good deal. But sun and dust spoil the fruit, and rainy weather keeps her at home; so her profits are

but little—not nearly enough to keep our boy at school. Now, please your majesty, if you would have the goodness to give her the bit of waste ground outside the Park gate, we could build a shed for her fruit-stall, and it would be, I may say, like an estate to us.'

The good-natured monarch smiled, and said: 'You shall have it, my friend. I wish all my subjects were as moderate in their requests as you.' He then rode on, followed by the grateful blessings of his faithful veteran.

In a few days a formal conveyance of the bit of ground to James Allen, his wife, and their heirs for ever, was forwarded to their humble dwelling. The desired shed was speedily erected, and the good woman's trade prospered beyond her expectations. Often, indeed, the king himself would stop at the Park gate to accost her, and taking an apple from her tempting store, deposit a golden token in its place. She was thus enabled to procure a good education for her son, who really possessed considerable talents.

Years rolled on: George II. and the veteran were both gathered to their fathers; but Mrs Allen still carried on her trade, hoping to lay up some money for her son, who was become a fine young man, and had obtained a situation as head clerk in a large haberdashery establishment. He lived with his mother in a neat, though humble dwelling, a little way out of the city; and thither he hoped soon to bring a fair young bride, the daughter of a Mr Gray, a music-teacher, who resided near them. 'Sweet Lucy Gray,' as her lover was wont to call her, had given her consent, and the happy day was already fixed.

One morning, however, when Mrs Allen proceeded as usual to her place of merchandise, she was startled to perceive the space around her fruit-stall filled with work-

men conveying stones, mortar, and all the implements necessary for commencing a building. Some were standing round the shed evidently preparing to demolish it. 'Come, old lady,' said one of the men, 'move your things out of this as fast as you can, for we can do nothing until the shed is down.'

'My shed!' she exclaimed; 'and who has given you authority to touch it?'

'The Lord Chancellor,' was the reply; 'he has chosen this spot for a palace that he is going to build, and which is intended to be somewhat grander than your fruit-stall. So look sharp about moving your property, for the shed must come down.'

Vain were the poor woman's tears and lamentations; her repeated assertions that the late king had given her the ground for her own, were treated with ridicule; and at length she returned home heart-sick and desponding.

Misfortunes, it is said, seldom come alone. That evening Edward Allen entered his mother's dwelling wearing a countenance as dejected as her own. He threw himself on a chair and sighed deeply. 'O mother!' he said, 'I fear we are ruined: Mr Elliot has failed for an immense sum; there is an execution on his house and goods, and I and all his clerks are turned adrift. Every penny we possessed was lodged in his hands, and now we shall lose it all. Besides, there have been lately so many failures in the city, that numbers of young men are seeking employment, and I'm sure I don't know where to turn to look for it. I suppose,' he added, trying to smile, 'we shall have nothing to depend on but your little trade; and I must give up the hope of marrying sweet Lucy Gray. It will be hard enough to see you suffering from poverty without bringing her to share it.'

'O Edward,' said his mother, 'what you tell me is bad enough; but, my poor boy, I have still worse news for you.' She then, with many tears, related the events of the morning, and concluded by asking him what they were to do.

Edward paused. 'And so,' said he at length, 'the Lord Chancellor has taken a fancy to my mother's ground, and her poor fruit-stall must come down to make room for his stately palace. Well, we shall see. Thank God, we live in free, happy England, where the highest has no power to oppress the lowest. Let his lordship build on; he cannot seize that which his sovereign bestowed on another. Let us rest quietly to-night, and I feel certain that all will yet be well.'

The following day, Edward presented himself at the dwelling of the Lord Chancellor. 'Can I see his lordship?' he inquired of the grave official who answered his summons.

'My lord is engaged just now, and cannot be seen except on urgent business.'

'My business is urgent,' replied the young man; 'but I will await his lordship's leisure.'

And a long waiting he had. At length, after sitting in an anteroom for several hours, he was invited to enter the audience-chamber. There, at a table covered with books and papers, sat Lord Apsley. He was a dignified-looking man, still in the prime of life, with a pleasant countenance and quick penetrating eye. 'Well, my friend,' he said, 'what can I do for you?'

'Your lordship can do much,' replied Edward; 'yet all I seek is justice. You have chosen, as the site for your new palace, a piece of ground which his majesty King George II. bestowed on my parents and their heirs

for ever; and since my father's death, my mother has remained in undisturbed possession. If your lordship will please to read this paper, you will see that what I state is the fact.'

Lord Apsley took the document, and perused it attentively. 'You are right, young man,' he said; 'the ground is indeed secured to your family by the act of our late gracious sovereign. I took possession of it, believing it to be a waste spot, but I now find I must become the tenant of your surviving parent. What does she expect for it?'

'That,' said Edward, 'she is satisfied to leave to your lordship. We are confident that the chief lawgiver of our country will do what is just and right.'

'You shall not be disappointed, young man,' replied the Chancellor. 'I was offered a site for my palace, equally eligible, at a yearly rent of four hundred pounds. That sum I will pay your mother, and have it properly secured to her heirs for ever.'

Edward thanked his lordship, and respectfully withdrew.

Before a week had elapsed, his mother was established in a neat and comfortable dwelling in one of the suburbs; and ere two had gone by, sweet Lucy (no longer Gray) might be seen in the sunny little garden filling a basket with the fruit of a golden pippin tree, which the old lady pronounced to be almost as fine as the apples which his gracious majesty King George II. was wont to select from her stall at Hyde Park Corner.

And thus it came to pass that the stately mansion of England's warrior-duke is subject, at the present day, to a ground-rent of four hundred pounds a year, payable to the representatives of the old apple-woman.

## GRACE DARLING.

celes'tial, heavenly.
depict', paint.
extraor'dinary.
extrem'ity, furthest out point.
grat'itude, thankfulness.
immor'tal, undying.
individ'uals.
machin'ery.
Northum'berland.
res'olute, determined.
surviv'ors, those who remained alive.

In the month of September of the year 1838, the *Forfarshire*, a steam-vessel proceeding from Hull to Dundee, encountered some rough weather off the coast of Northumberland. The vessel not being strong, and the machinery of the steam-engine being defective, she was wrecked on the rocks called the Great Harkars, at the extremity of one of the Ferne Islands. Many of the crew and passengers were washed off the deck and drowned; and in a situation of such great peril, no one expected to escape.

Early in the morning, the family who dwelt in the North Sunderland light-house, on looking abroad, beheld the vessel upon the rocks, with a powerful sea beating upon her, and threatening her with complete destruction. Darling, the keeper of the light-house, would fain have gone in his boat to rescue a few of the distressed passengers, but he despaired of carrying his little bark through such a heavy sea. He was at length encouraged to make the attempt by his daughter Grace, a girl of twenty-two years of age, who offered to accompany him, and work one of the oars. They went; they reached the vessel; nine persons trusted their lives to the boat; and, notwithstanding the raging of the sea, the whole party arrived safely at the light-house, where every necessary

attention was shewn to the individuals who had been rescued. As no other persons were saved from the wreck, it may be concluded that these would have perished had it not been for the heroism of Grace Darling, who was willing to risk her own life rather than allow so many fellow-creatures to sink before her eyes without an effort being made in their behalf.

The generous conduct of this young woman attracted much attention. Her praises were for a time in every mouth. Artists flocked to her lonely dwelling to take her portrait, and depict the scene in which she had been engaged. A sum exceeding six hundred pounds was collected and presented to her; and some of the most eminent persons in the land wrote letters to her containing warm expressions of regard. It is to be hoped that her name and her heroic act will not soon be forgotten, for less admirable actions, which took place several thousand years ago, are still remembered. Yet this excellent girl, as modest as she was brave, was heard to remark that she never would have supposed that she had done anything extraordinary, if her conduct had not been so much spoken of by others.

. . . . 'would that some immortal Voice—a Voice
Fitly attuned to all that gratitude
Breathes out from floor, or couch, through pallid lips
Of the survivors—to the clouds might bear—
Blended with praise of that parental love,
Beneath whose watchful eye the Maiden grew
Pious and pure, modest and yet so brave,
Though young so wise, though meek so resolute—
Might carry to the clouds and to the stars,
Yea, to celestial choirs, Grace Darling's name!'

WORDSWORTH.

## THE VILLAGE BLACKSMITH.

1.

Under a spreading chestnut tree
The village smithy stands;
The smith, a mighty man is he,
With large and sinewy hands;
And the muscles of his brawny arms
Are strong as iron bands.

2.

His hair is crisp, and black, and long,
His face is like the tan;
His brow is wet with honest sweat;
He earns whate'er he can,
And looks the whole world in the face,
For he owes not any man.

3.

Week in, week out, from morn till night,
You can hear his bellows blow;
You can hear him swing his heavy sledge,
With measured beat and slow,
Like a sexton ringing the village bell,
When the evening sun is low.

4.

And children coming home from school
Look in at the open door;
They love to see the flaming forge,
And hear the bellows roar,
And catch the burning sparks that fly
Like chaff from a threshing-floor.

5.

He goes on Sunday to the church,
And sits among his boys;
He hears the parson pray and preach,
He hears his daughter's voice
Singing in the village choir,
And it makes his heart rejoice.

6.

It sounds to him like her mother's voice,
Singing in paradise!
He needs must think of her once more,
How in the grave she lies;
And with his hard, rough hand, he wipes
A tear out of his eyes.

7.

Toiling—rejoicing—sorrowing,
Onward through life he goes;
Each morning sees some task begun,
Each evening sees it close;
Something attempted, something done,
Has earned a night's repose.

8.

Thanks, thanks to thee, my worthy friend,
For the lesson thou hast taught!
Thus at the flaming forge of life
Our fortunes must be wrought;
Thus on its sounding anvil shaped
Each burning deed and thought!

## THE LION AND THE SPANIEL.

**acknow'ledgment.**
**acquiesce'**, agree.
**auda'ciously**, daringly.
**catas'trophe**, end.
**com'plaisance**, civility.
**im'potent**, powerless.
**lieu**, place.
**monop'oly**, sole possession.
**obla'tion**, offering.
**philosoph'ic.**
**pre-em'inence**, state of being superior.
**sup'plicatory**, entreating.
**tac'itly**, without expressing it.
**Tower**, of London, where lions were at one time kept.

In the afternoon our company went again to the Tower to see the great lion and the little dog, as well as to hear the recent story of their friendship. They found the place thronged, and all were obliged to pay treble prices on account of the novelty of the show; so that the keeper, in a short space, acquired a little fortune.

The great cage in the front was occupied by a beast, who, by way of pre-eminence, was called the king's lion; and, while he traversed the limits of his straitened

dóminions, he was attended by a small and very beautiful black spaniel, who frisked and gambolled about him, and at times would pretend to snarl and bite at him; and again the noble animal, with an air of fond complaisance, would hold down his head while the little creature licked his formidable chaps. Their history, as the keeper related it, was as follows:

It was customary for all who were unable or unwilling to pay their sixpence, to bring a dog or cat as an oblation to the beast in lieu of money to the keeper. Among others, a fellow had caught up in the streets this pretty black spaniel, who was accordingly thrown into the cage of the great lion. Immediately the little animal trembled, and shivered, and crouched, and threw itself on its back, and put forth its tongue, and held up its paws in supplicatory attitudes, as an acknowledgment of superior power, and praying for mercy.

In the meantime, the lordly brute, instead of devouring it, beheld it with an eye of philosophic inspection. He turned it over with one paw, and then turned it with the other; smelled it, and seemed desirous of courting a further acquaintance. The keeper, on seeing this, brought a large mess of his own family dinner; but the lion kept aloof, and refused to eat, keeping his eye on the dog, and inviting him, as it were, to be his taster. At length the little animal's fears being somewhat abated, and his appetite quickened by the smell of the victuals, he approached slowly, and with trembling ventured to eat. The lion then advanced gently and began to partake, and they finished their meal very lovingly together.

From that day the strictest friendship commenced between them—a friendship consisting of all possible affection and tenderness on the part of the lion, and of

the utmost confidence and boldness on the part of the dog; insomuch that he would lay himself down to sleep within the fangs and under the jaws of his terrible patron.

A gentleman who had lost the spaniel, and had advertised a reward of two guineas to the finder, at length heard of the adventure, and went to reclaim the dog. 'You see, sir,' said the keeper, 'it would be a great pity to part such loving friends; however, if you insist upon having your property, you must even be pleased to take him yourself; it is a task that I would not engage in for five hundred guineas.' The gentleman rose into great wrath, but finally chose to acquiesce rather than have a personal dispute with the lion.

As Mr Felton had a curiosity to see the two friends eat together, he sent for twenty pounds of beef, which was accordingly cut in pieces, and given into the cage; when immediately the little brute, whose appetite happened to be eager at the time, was desirous of making a monopoly of the whole, and putting his paws upon the meat, and grumbling and barking, he audaciously flew in the face of the lion. But the generous creature, instead of being offended with his impotent companion, started back, and seemed terrified at the fury of his attack, neither attempted to eat a bit till his favourite had tacitly given permission.

When they were both gorged, the lion stretched and turned himself, and lay down in an evident posture for repose; but this his sportive companion would not admit. He frisked and gambolled about him, barked at him, would now scrape and tear at his head with his claws, and again seize him by the ear and bite and pull away; while the noble beast appeared affected by no other sentiment save that of pleasure and complacence. But let us

proceed to the tragic catastrophe of this extraordinary story—a story still known to many, as delivered down by tradition from father to son.

In about twelve months the little spaniel sickened and died, and left his loving patron the most desolate of creatures. For a time the lion did not appear to conceive otherwise than that his favourite was asleep. He would continue to smell him, and then would stir him with his nose, and turn him over with his paw; but, finding that all his efforts to awake him were vain, he would traverse his cage from end to end at a swift and uneasy pace, then stop and look down upon him with a fixed and drooping regard; and again lift his head on high, and open his awful throat, and prolong a roar, as of distant thunder, for several minutes together.

They attempted, but in vain, to convey the carcass from him; he watched it perpetually, and would suffer nothing to touch it. The keeper then endeavoured to tempt him with variety of victuals, but he turned with loathing from all that was offered. They then put several living dogs into his cage, and these he instantly tore piecemeal, but left their members on the floor. His passion being thus inflamed, he would dart his fangs into the board, and pluck away large splinters, and again grapple at the bars of his cage, and seem enraged at his restraint from tearing the world to pieces.

Again, as quite spent, he would stretch himself by the remains of his beloved associate, and gather him in with his paws, and put him to his bosom; and then utter under-roars of such terrible melancholy as seemed to threaten all around, for the loss of his little play-fellow, the only friend, the only companion, that he had upon earth.

## THE DROP OF WATER.

**expe'dient**, means.
**fero'cious**, very fierce.
**in'nocent**, doing no harm.
**magi'cian**, one skilled in magic or enchantment.
**mi'croscope.**

Surely you know what a microscope is—that wonderful glass which makes everything appear a hundred times larger than it really is. If you look through a microscope at a single drop of ditch-water, you will perceive more than a thousand strange-shaped creatures, such as you could never imagine dwelling in the water. It looks not unlike a plateful of shrimps, all jumping and crowding upon each other; and so ferocious are these little creatures, that they will tear off each other's arms and legs without mercy; and yet they are happy and merry after their fashion.

Now there was once an old man, whom all his neighbours called Cribbley Crabbley; a curious name to be sure! He always liked to make the best of everything, and, when he could not manage it otherwise, he tried magic.

So one day he sat with his microscope held up to his eye, looking at a drop of ditch-water. Oh, what a strange sight was that! All the thousand little imps in the water were jumping and springing about, devouring each other, or pulling each other to pieces.

'Upon my word, this is too horrible!' quoth old Cribbley Crabbley; 'there must surely be some means of making them live in peace and quiet.' And he thought and thought, but still could not hit on the right expedient. 'I must give them a colour,' he said at last, 'then I shall be able to see them more distinctly;' and accordingly he let fall into the water a tiny drop of

something that looked like red wine; whereupon all the strange little creatures immediately became red all over, not unlike the red Indians; the drop of water now seemed a whole townful of naked wild men.

'What have you there?' inquired another old magician, who had no name at all, which made him more remarkable even than Cribbley Crabbley.

'Well, if you can guess what it is,' replied Cribbley Crabbley, 'I will give it you; but I warn you, you'll not find it out so easily.'

And the magician without a name looked through the microscope. The scene now revealed to his eyes actually resembled a town where all the inhabitants were running about without clothing; it was a horrible sight!

But still more horrible was it to see how they kicked and cuffed, struggled and fought, pulled and bit each other. All those that were lowest must needs strive to get uppermost, and all those that were highest must be thrust down. 'Look, look!' they seemed to be crying out; 'his leg is longer than ours; pah! off with it! And there is one who has a little lump behind his ear—an innocent little lump enough, but it pains him, and it shall pain him more!' And they hacked at it, and seized hold of him, and devoured him, merely because of this little lump.

'This is most uncommonly amusing,' remarked the nameless magician.

'Do you think so? Well, but what is it?' asked Cribbley Crabbley. 'Can you guess, or can you not?'

'To be sure I can guess' was the reply of the nameless magician, 'easy enough. It is either Copenhagen or some other large city; I don't know which, for they are all alike. It is some large city.'

'It is a drop of ditch-water!' said Cribbley Crabbley.

# LESSONS ON ANIMALS.

## INTRODUCTION.

**amphib'ians**, capable of *living both* on land and in water.
**nerv'ous system**, the brain, spinal cord, and nerves.
**quad'rupeds**, *four-footed* animals.
**sensa'tion**, power *to feel.*
**skel'eton**, framework.
**ver'tebrate**, having a backbone.
**vol'untary**, proceeding *from the will.*

Almost all parts of the earth's surface are inhabited by living beings that can feel and move about from place to place, in other words, that have sensation and voluntary motion. In these respects they differ from vegetables, and are called *animals.*

There are many kinds of animals, such as quadrupeds, birds, fishes, and insects, of which we all know something, but there are besides numerous varieties of each of these. Animals are either *vertebrate* or *invertebrate.* VERTEBRATE ANIMALS are those that are furnished with a backbone and skull, protecting a superior nervous system. The backbone and skull form parts of an internal skeleton, on which the softer parts of the animal are framed. Animals which have no skull or backbone are said to be INVERTEBRATE.

VERTEBRATE ANIMALS are divided into five classes:

1. MAMMALS, or suck-giving animals, as man, the monkey, bat, dog, whale.
2. BIRDS, as the eagle, swallow, duck.
3. REPTILES, or creeping animals, as the crocodile, lizard, snake, tortoise.
4. AMPHIBIANS, capable of living both on land and in water, as the frog, newt.
5. FISHES, as the herring, cod, salmon, shark.

# LESSONS ON ANIMALS.

## MAMMALS. (1).

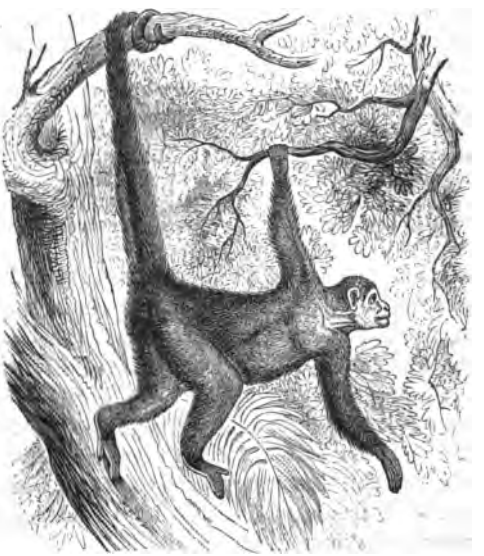
*Four-handed animals—Bats—Insectivorous animals—Rodent or gnawing animals.*

acces'sible, that can be reached.
bur'rowing, making holes under the ground.
com'plex, intricate, not simple.
extrem'ities, utmost points, as hands and feet.
fero'cious, extremely fierce.
insectiv'orous, *living on insects.*
intell'igence, skill.
mem'brane, a thin texture.
omniv'orous, *all-devouring*, living on both animal and vegetable food.
organisa'tion, system of organs or parts suited for special purposes.
prehen'sile, *laying hold of*, capable of seizing or holding.
resem'blance, likeness.
tor'pid, benumbed, without the power of motion or feeling.

MAMMALS form the highest group in the Animal Kingdom, because they possess the most complex organisation, adapted to perform the greatest number and variety of actions, and to execute these with the greatest intelligence. They are warm-blooded like birds, and, like birds and reptiles, they breathe air, and generally live on the surface of the earth. They produce their young alive, and nourish them by *suckling*, from which circumstance their class-name is derived. In this latter particular they differ from all other animals.

Next to Man, who stands at the head of the Mammals, come FOUR-HANDED ANIMALS—Apes, Baboons, and Monkeys. They are remarkable for the resemblance they bear to the human race, and for the intelligence which many of them display. They are omnivorous animals, dwelling in the forests of warm countries, and spending much of their time on the branches of trees, among which they are well fitted to move by reason of the grasping

power of their extremities, their hind-feet serving the purpose of hands. In some, the arms are so long that they touch the ground when the animal stands almost upright. Some monkeys have long prehensile tails, capable of being twisted round branches so firmly as entirely



Spider Monkey.

to support the weight of the animal; others have no tail at all. The baboons are fierce-looking animals, with short tails. Of apes, the largest is the Gorilla, of Africa. It attains a height of fully five feet, is extremely ferocious, and is regarded as the animal most nearly resembling man.

BATS are small animals, mostly-of insectivorous habits, feeding upon insects, and seldom seen abroad except at night. They are remarkakle for their largely developed hand, with a membrane between the fingers, enabling them to fly in the air in search of their prey. The Vampire Bat of South America sucks the blood of animals much larger than itself.

The order of INSECTIVOROUS MAMMALS contains the Shrew; the Mole, living chiefly underground, burrowing for worms, but not, as is generally supposed, without organs for seeing and hearing; and the Hedgehog, so called because it prefers the roots of hedges for its hiding-place, and from its slight resemblance to a pig. In some places it is called *hedgepig*. The hedgehog is provided with a spiny coat of armour, which it can draw over every accessible part of the body, so as effectually to protect itself from all ordinary enemies. All these animals are torpid in winter.

RODENT or GNAWING ANIMALS derive their name, as an order, from their being furnished with teeth, which do not directly cut or tear, but file through, or gnaw, what they are disposed to eat. They are remarkable for their long hind-legs, which give them a lurching mode of walking. Most of them are afraid of other animals, and live as much as possible in obscure situations. The order comprises amongst others the Squirrel; the Marmot of Northern Italy; the Jerboa of Russia and North America; Rats and Mice; the Beavers, remarkable for their skill in the construction of their huts, and in the erection of dams for their protection; the Porcupine or 'spiny-pig,' armed with stiff and pointed quills or spines; the Guinea-pig, introduced into this country from South America; and the Hare and Rabbit.

## KINDNESS TO ANIMALS.

I would not enter on my list of friends
(Though graced with polished manners and fine sense,
Yet wanting sensibility) the man
Who needlessly sets foot upon a worm.
An inadvertent step may crush the snail
That crawls at evening in the public path;
But he that has humanity, forewarned,
Will tread aside, and let the reptile live.
The creeping vermin, loathsome to the sight,
And charged perhaps with venom, that intrudes,
A visitor unwelcome, into scenes
Sacred to neatness and repose, the alcove,
The chamber, or refectory, may die:
A necessary act incurs no blame.
Not so when, held within their proper bounds,
And guiltless of offence, they range the air,
Or take their pastime in the spacious field:
There they are privileged; and he that hunts
Or harms them there is guilty of a wrong,
Disturbs the economy of Nature's realm,
Who, when she formed, designed them an abode.
The sum is this: If man's convenience, health,
Or safety, interfere, his rights and claims
Are paramount, and must extinguish theirs.
Else they are all—the meanest things that are—
As free to live, and to enjoy that life,
As God was free to form them at the first,
Who in his sovereign wisdom made them all.

## BENJAMIN FRANKLIN.

ambass'ador, one sent to represent the state.
beha'viour.
Ben'jamin.
chand'ler, a dealer or seller, originally a dealer in candles.
circula'tion, sale far and wide.
fo'lio, a sheet of paper once folded.
fru'gally, with thrift or economy.
indus'trious, busy, diligent in work.
investiga'tions, studies.
max'ims, sayings.
Philadel'phia.
philosoph'ical, relating to philosophy or knowledge.
punctual'ity, keeping the exact time.
satisfac'tory, satisfying, convincing.
scientif'ic, relating to science.
spir'ituous, containing spirit.
subscrip'tion.

Benjamin Franklin was the son of a tallow-chandler at Boston, in North America. His father, who was a poor man, brought him up as a printer. Benjamin was fond of reading, and spent all the money he could spare in buying books. At the same time he did not neglect his work. He lived sparingly, and never wasted his time. When seventeen years old, he removed to Philadelphia, another city in North America, and there worked for some time with a printer named Keimer. He was already, by his talents and diligence, able to write a letter in neat and proper language. It chanced that the governor of the province saw a letter he had written, and thought so highly of it, that he went to seek for the young printer at his master's shop, and invited him to his house. Franklin soon after went to London, where he worked for some time with various printers. While the other workmen spent five or six shillings a week on beer, with which they were continually muddling their brains, Benjamin drank no fermented or spirituous liquor, and thus, while much clearer in the head, and much healthier than they, he saved a good deal of money.

At twenty years of age, he returned much improved to Philadelphia, where, soon after, he set up in business with Mr Keimer. He was now extremely industrious. Every day he composed or arranged the type of a sheet of small folio, besides attending to other business. His neighbours, pleased with his diligence, his honesty, and correct behaviour, and his lively talents, brought him all the business they could; and thus he could not fail to prosper. He now set up a newspaper, which he conducted with so much prudence and ability, that it acquired a great circulation, and brought him in much profit. Still, however, to shew that he was not spoiled by his success, he dressed very plainly, lived frugally, and would sometimes be seen wheeling along a barrow containing the paper which he had purchased for his printing-office. He then set up as a stationer, commenced a subscription library, and began to publish an annual work, entitled *Poor Richard's Almanac*, which contained a great deal of prudent and sensible advice, and a great many wise maxims. Still, amidst all his cares and labours, he gave much of his time to the improvement of his mind. At thirty, so great was the respect he had gained amongst his fellow-citizens, that he was appointed clerk to the House of Assembly for the province, and next year he became deputy-postmaster. At the same time he did not forget that, with such abilities as he possessed, he owed a certain duty to his fellow-creatures. He set up a philosophical society for cultivating science and letters; he established a superior academy for the education of youth; and he was the means of establishing a company for insurance against loss by fire. Indeed, almost all the public affairs of the province were more or less directed by Benjamin Franklin.

Afterwards he engaged in scientific investigations. In the year 1752, by means of a kite, he drew down an electric spark from thunder-clouds, by which he was the first to shew that lightning and the electric spark are the same thing. This discovery made the name of the Philadelphia printer famous throughout Europe. When he had arrived at a mature period of life, the American provinces and the mother-country engaged in a war, which ended in the former becoming independent of the latter. In this contest, Franklin took a leading part. He for some years acted as ambassador from his native country to the king of France—which gave him occasion to remember a passage of Scripture which his father would sometimes repeat, 'Seest thou a man diligent in his business? he shall stand before kings'—the full sense of which we can only feel when it is known that in the East, long ago, and so it is to this day, to *stand* before a king was esteemed a high mark of honour. Thus Benjamin Franklin concluded his life in wealth and honour far above that of most men, though he had originally entered life a very poor boy.

When one man has done well in the world, it is natural for the rest to wish to know by what means he prospered. If we make this inquiry respecting Franklin, we shall find satisfactory answers in the writings he has left to us. He says: 'The way to wealth, if you desire it, is as plain as the way to market. It depends chiefly on two words—*industry* and *frugality;* that is, waste neither time nor money, but make the best use of both. Without industry and frugality, nothing will do; and with them, everything.' After industry and frugality, nothing contributes more to the raising of a young man in the world than punctuality and justice in all his dealings.

# LESSONS ON ANIMALS.

## MAMMALS (2).

*Carnivorous animals—The Elephant—Hoofed animals.*

**Camel'opard,** 'the camel-pard.'
**carniv'orous,** *feeding on flesh.*
**Chamois** (sham'waw).
**digit'igrade,** *walking on the toes.*
**E'land.**
**herbiv'orous,** *feeding on plants.*
**Hippopot'amus,** 'river-horse.'
**Ichneu'mon,** 'the tracker,' from its tracking or hunting the eggs of the crocodile.
**pachyder'matous,** *thick-skinned.*
**plant'igrade,** *walking on the sole of the foot.*
**probos'cis,** a trunk for conveying food to the mouth.
**progres'sion,** *movement forward.*
**retrac'tile,** *that may be drawn back.*
**Rhinoc'eros,** 'horned nose.'
**ru'minant,** chewing the cud.
**Wol'verine** (wool'ver-een), so called from its *wolfish* character.

The order of CARNIVOROUS ANIMALS, or 'flesh-eaters,' is composed of a great variety of important animals, most of which are beasts of prey. This order is divided into *digitigrade* animals and *plantigrade* animals. Digitigrade animals in walking touch the ground only with the ends of their toes, the heel being considerably raised into the air, so that the limbs can be readily used in running and springing. Of these the *Cat tribe* embraces the Lion, Puma, Tiger, Jaguar, Panther, Leopard, Lynx, and Cat. They are remarkable for the union of great strength with great lightness and agility, and for their powerful claws, which are called retractile, as they can draw them within a sheath, to prevent them from being blunted when they are not in use. They steal upon their prey unawares, and seize it with a sudden spring, often slinking off when

once baffled. To the *Dog tribe* belong the Dog, Wolf, Fox, and Jackal. Other digitigrade animals are the Hyena, a ferocious animal found in Asia and Africa; the Ichneumon of Egypt, which feeds largely on the eggs of the crocodile; the perfume-yielding Civets of India and Africa; the Otter, with webbed feet, frequenting the banks of streams, and living chiefly upon fish; the Ermine and Sable of the Arctic regions, valued for their splendid fur; the Skunk of North America, the Polecat, the Marten, and the Ferret, all of which emit a strong and disagreeable smell; and the Weasel, destructive of rats, mice, moles, &c.

In *plantigrade* animals, the whole or greater part of

Harp Seal, attitude on land.

the sole of the foot rests on the ground, enabling the animal to maintain a firm position, but preventing great activity of progression. Belonging to this section are the Bear, the Racoon of North America, the Badger, and the Glutton or Wolverine of the Arctic regions.

Another section of the carnivorous animals is formed of the Seals and Walruses, which may be termed the tigers and bears of the sea. Their bodies have a fish-like form, and are covered with a close-set fur. Their short feet are spread out into fin-like paddles, fitted for swimming. They pass the greater part of their time in the water, which they only quit to bask in the sunshine, and to suckle their young. They are found chiefly in the Arctic and Antarctic Oceans.

Of animals having a proboscis or trunk the Elephant

Rhinoceros.

is the only living specimen. Elephants are found in the great forests of India and Africa, where they feed on the leaves of trees and long grass.

The order of HOOFED ANIMALS is divided into *pachydermatous*, or thick-skinned animals, and *ruminant* animals, or those which chew the cud. Pachydermatous animals are represented by the Rhinoceros of India and Africa,

so called from one or two horns on its snout; the Tapir of America, about the size of an ass; and the Horse, Ass, Zebra, &c.; the Hippopotamus, or 'river-horse' of Africa, a massive unwieldy animal, the teeth of which are valuable as ivory; and the Pig-tribe, including the Peccaries of America.

Ruminant animals, as the Ox, Sheep, &c. are so called from the singular faculty they possess of masticating their food a second time, or 'chewing the cud.' This faculty depends on the structure of their stomachs, which are four in number. The food first descends, in a slightly chewed state, into a large paunch; thence it passes into a smaller, the inside of which is like a honeycomb, where it is made up into 'cuds,' or small balls. The animal, lying at its ease, causes those balls to come back into the mouth, to be more effectually chewed. When the food has undergone this last process, it descends into a third stomach, and thence into a fourth, where it is digested. These animals are generally timid, and destitute of powerful means of defence against their foes. The ruminants are, of all animals, the most useful to man. They supply him with a large proportion of his animal food. Some serve him as beasts of burden; others furnish him with their milk, their tallow, hair, leather, horns, and other useful products.

The principal animals belonging to the group of Ruminants are the Camel tribe, the Deer tribe, the Camelopard, the Ox, Buffalo, &c.; the Sheep, Goat, and Antelope. The *Camel tribe* consists of two species, the two-humped or Bactrian Camel, and the one-humped or Arabian Camel, of the latter of which the Dromedary is a lighter variety. The camel, 'the ship of the desert,' is remarkable for its usefulness as a beast of burden. Its

cushioned feet adapt it for the sandy surface to be crossed; its humps form storehouses of extra nourishment for its use on the way; while its stomach can contain a supply of water sufficient for several days. The flesh and milk of the camel serve as food to man, and its hair is used in the manufacture of cloth.—The animals of the *Deer tribe* are remarkable for the character of the horns or antlers of the males, which are composed of solid bone. The largest species is the Elk or Moose Deer, found in the northern parts of Europe, Asia, and America. The Reindeer, so useful to the Laplanders, is the only species properly domesticated.—The *Camelopard* or Giraffe of Africa is a gentle and inoffensive animal, measuring about eighteen feet in height. It derives its name from its skin, spotted like that of a pard or panther, and its camel-like neck.—*Antelopes* are remarkable for their slenderness of form and swiftness of foot. The speed of the swiftest species surpasses that of every other mammiferous animal. They are chiefly found in Africa; but one species, the Chamois, inhabits the mountainous parts of the south of Europe. The African antelopes include the Eland, the largest species of the family; the Gazelle, noted for its beautiful eyes; and the Spring-bok, which occasionally visits cultivated lands during seasons of drought, in innumerable herds, causing devastation wherever they pass. A curious animal, allied to the antelopes, is the Gnu of South Africa. The body, tail, neck, and mane resemble those of a horse, while the horns are like those of the Cape Buffalo, and the legs are slender and light as those of a stag.—*Sheep* and *Goats* have their horns turned upwards and backwards. Goats are found wild only in mountainous countries. They all exhibit a great aptitude for scrambling among rocks and bushes,

are extremely sure-footed on narrow ledges and pinnacles, and display great strength and agility in leaping. The goats of Asia are celebrated for the fine quality of their hair. The Ibex of the Alps and Caucasus is remarkable for the size and strength of its horns. The Merino Sheep of Spain are specially valuable for their fine wool.—Of all the Ruminants, the family of *Oxen* are the most useful to man. They are large animals, with a broad muzzle, robust

Gnu.

form, and stout limbs. Of wild species may be mentioned the Aurochs, or 'wild ox,' formerly spread over Europe, but now restricted to the Caucasus; the American Bison, commonly called Buffalo; the Common Buffalo, some of which have been domesticated; the Cape Buffalo, an extremely fierce animal, with large horns, inhabiting the woods of Caffraria; and the Musk Ox, of the coldest regions of North America, which diffuses more strongly than the rest the musky odour common to the whole genus.

## THE FRIEND'S PLEDGE.

av'enue, road, approach.
conspir'ator, one who plots for an evil purpose.
cow'ardice, want of courage.
Diony'sius.
ham'strung, cut the string of the ham or thigh so as to lame it.
impe'rial, of superior excellence.
infatua'tion, foolishness.
philos'opher, a lover of wisdom, one versed in learning.
precau'tions, care taken beforehand.
scep'tic, unbeliever.
sub'stitute, one in place of another.
Syr'acuse, a city on the east coast of the island of Sicily.
vas'sal, servant, subject.

*Dionysius.* Is Damon, the philosopher, ready to redeem his pledge? The hour is nigh; and Pythias appears not. Freely didst thou become his substitute; and if thy friend, this convicted conspirator against my throne, returns not in five minutes, thou must die.

*Damon.* I am content. I ask no respite. But he will return. Do not doubt that.

*Di.* Dost thou believe it still?

*Da.* Most confidently. Yes, if he lives, he will be here at the hour fixed.

*Di.* The watchmen on the towers have scanned with care each avenue that leads to Syracuse, and yet no horseman, eager in his haste, appears upon the road. Thou art cheated.

*Da.* Cheated by *him*? O, never! He will return in season.

*Di.* He must ride faster, then, than ever horseman rode into Syracuse. But, should he *not* return?

*Da.* Why, even then, King Dionysius, I would not believe—not for one moment would I—that my friend intended to betray me. Accidents may happen. A horse may stumble; a man may be waylaid—prevented.

*Di.* When a friend's life, pledged for one's own, hangs on the event, there should be such precautions as would bar out accidents. He should have been content with naught but certainty.

*Da.* No life is certain. What if, in his haste, he should have overtasked himself, and fallen helpless?

*Di.* What if his wife and children should have held him? What if the fear of death should have so weakened his knees that he could not come?

*Da.* Unkingly sneer! Oh, couple not the thought of cowardice with Pythias! He would abhor a life saved by betrayal of a friend. Should he not come——

*Di. Should* he not come? He *has* not come. One moment more, and the signal for thy death sounds in the court-yard.

*Da.* Let it sound! Now do I hope in truth he will not come; for now I know that some mischance detains him. He has a wife and children; I have neither. *Me* few would miss, save Pythias.

*Di.* And thou canst trust him still! Infatuation! Hark! Now summon thy philosophy. The signal sounds, and where is Pythias?

*Enter* PYTHIAS.

*Pythias.* Pythias is here!

*Da.* Returned! My friend! I knew thou wouldst return.

*Di.* And have I then misjudged him? Is it he?

*Da.* Dear Pythias, I had begun to hope some happy chance would keep you back. You cannot speak. Your breath comes painfully.

*Pyth.* A moment—and I'll tell thee—tell thee all—how I was delayed.

*Di.* And have I been a sceptic all my life in friendship, now to find that it exists, a bright reality, in these two hearts?

*Pyth.* O Damon! Didst thou mistrust me? Didst thou think that I would play thee false? Confess! Thou didst—just for one moment?

*Da.* Not for one moment, Pythias! I would have laid my head upon the block as certain of thy truth as I am now.

*Pyth.* I do believe thee. Thus it happened, Damon: my freedman, Hermion, hoping to save my life, hamstrung my horse, to stop me on my journey.

*Da.* Poor fellow! 'Twas in fondness that he did it.

*Pyth.* Ay, 'twas in fondness; but, in my frenzy at the deed, I dragged him to a cliff, and might have hurled him headlong down, had I not, at the moment, spied a traveller on a fresh steed.

*Da.* For thy sake, O my friend! I wish that traveller had kept away.

*Pyth.* Forcing him to dismount, I took his place, and, riding at a gallop till the horse dropped with his mighty efforts, I rushed on, the rest of the way on foot; and here I am—and thou, my friend, art safe.

*Di.* (*aside*). Now do I feel as if *he* were the king, and *I* the vassal.

*Da.* O that my life might purchase thine, my friend!

*Pyth.* Damon, thou'lt be the guardian of my children; for they are young and helpless. In that thought lies the only sting of death, and even *that* thy friendship takes away. Don't droop.

*Da.* I never felt till now the greatness of this woe. I cannot lose thee.

*Pyth.* Cheer up. Remember thine own lessons. Hast thou not taught me death is but a step to higher life?

*Da.* 'Tis *I* should strengthen *thee;* yet thou, the victim, art, too, the consoler.

*Pyth.* And why not? 'Tis *I* that am the gainer.

*Di.* Twice has the signal sounded. Are you ready?

*Pyth.* Farewell, my friend. Now Dionysius, let your officers come forth, for I am ready.

*Di.* So am not I.

*Da.* What mean you, king? There is a royal mercy in your eyes.

*Di.* Pythias, thou hast wronged me, but I believe a man so true in friendship will keep his faith with kings.

*Da.* Doubt it not, Dionysius! Doubt it not.

*Di.* Wilt thou no longer plot against my throne, should I now spare thy life, and give thee back to home and freedom?

*Pyth.* That I can promptly promise, Dionysius. There shall be no more *plots.* All that I do shall be done openly.

*Di.* Enough! Admit me to your friendship; for it is stronger than the soldier's arm, and more imperial than the pomp of kings.

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## PLEASURE AND DUTY.

'Tis a just doom, that they who make
  Pleasure their only end,
Ordering the whole life for its sake,
  Miss that whereto they tend.
While they who bid stern Duty lead,
  Content to follow, they,
Of Duty only taking heed,
  Find Pleasure by the way.

## LESSONS ON ANIMALS.

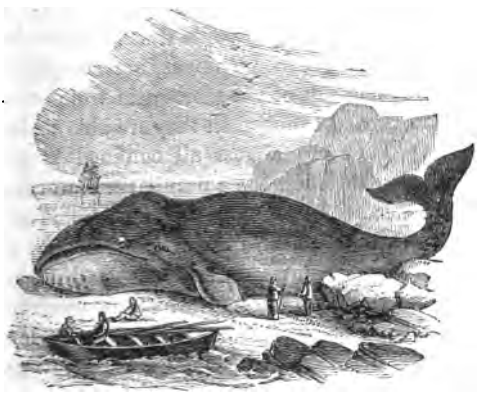
### MAMMALS (3).

*Whales—Animals without front teeth—Pouched animals—The Ornithorhynchus.*

**appara'tus,** *something prepared* for a purpose.
**aquat'ic,** *relating to water.*
**Armadill'o,** so called from its *armour.*
**horizon'tally,** on a level.
**in'dolent,** lazy.
**ingre'dient,** *that which enters into* a mixture, a part.
**Kangaroo'.**
**Manatee'.**
**marsu'pial,** carrying the young *in a pouch.*
**Ornithorhyn'chus,** 'bird-snout.'
**peculiar'ities.**
**Por'poise** (por'pus), 'the hog-fish,' from its appearance.
**spermace'ti,** a waxy substance found in the skull of the whale.
**ver'tically,** up and down.

The next order of mammals is that of the WHALES, which are in general bulky animals, with a fish-like form, and adapted for an aquatic life. The whale moves through the water by means of its paddles, aided by the hind extremities, which take the shape of a *horizontally* flattened tail, the tails of fishes being flattened *vertically.* The common whale reaches a length of seventy feet or more. It has two skins, inclosing a thick padding of fat called 'blubber,' useful for keeping the animal warm in the cold Arctic seas in which it lives; and to obtain this fat for use as oil, there is a regular fishery of the whale. The sailors transfix it with a harpoon, or long iron spear, to which a line is attached, and when it rises exhausted to the surface, they kill it, and extract the blubber. The great danger of this business is from the tail of the whale, which is quite able to upset a boat, or

even to cut it in two. A horny apparatus in the mouth of the whale, used by it as a strainer in which to catch the small marine creatures which form its food, is also in great request for various uses under the name of *whale-bone.* The Spermaceti Whale of the Southern Ocean receives its name from a waxy substance found in a cavity of its skull. It is called *spermaceti,* and is used chiefly



Greenland or Right Whale.

as an ingredient in ointments. Smaller animals of this order are Dolphins and Porpoises, which are very active and lively in the water. One of these, the Narwhal or Sea-Unicorn of the Arctic seas, is remarkable for one of its front teeth, which is developed into a bony spear six feet long. Other whales are the Sea-Cows, which are herbivorous, living upon marine plants. These include the Dugongs of the Indian Ocean, and the Manatees of the Gulf of Mexico.

A small order of mammals is composed of animals *having no front teeth.* It includes the Sloth, so called from its slow motions, and apparently indolent character, found in South America, living on trees, which it never leaves except when compelled; the Armadillo of South America, covered with scales, like an ancient warrior in his armour; and the Ant-eater of Asia and Africa, remarkable for his habit of laying out his long tongue across a path traversed by ants, till hundreds of them are upon it, when he draws it in, and devours them.

MARSUPIALS, or pouched animals, are so called from a pouch in the abdomen of the mother, in which the young are kept and carried about until they are able to look after themselves. They are almost all confined to Australia. These animals exhibit in some peculiarities an alliance to birds, and their habits are very various. Some are 'root-eaters,' as the Wombat of Tasmania, about the size of a badger. Others are 'grass-eaters,' as the Kangaroos of Australia, the largest species of which is sometimes six feet in height. They are remarkable for the length of their hind-legs and tail, which give them great power in leaping. Some, again, are 'insect-eaters,' as the Opossum of America; while others feed on flesh, as the almost untamable 'Tasmanian devil,' which is very destructive to sheep and poultry.

Another order of mammals is exclusively Australian, and is represented by the Ornithorhynchus, which shews its affinity to the bird-tribes by having webbed feet and a bill like that of a duck.

## THE HONEST DUTCHMEN (1).

**complex'ion**, colour.
**con'querors.**
**coun'tenance.**
**exulta'tion**, lively delight.
**imme'diate.**
**indus'trious**, diligent in labour.
**mer'chandise.**
**neces'sity.**
**perplex'ity**, doubt and difficulty.
**so'journed**, dwelt for a time.
**tran'quil**, calm.
**vora'cious**, eager to devour.

It came to pass, in the days of old, that the men of Holland found themselves straitened in their habitations; for who knows not that they were, from the first, a sober, hardy, and industrious race, tilling the ground, buying and selling, eating and drinking in humility, and therefore they lived to a good old age, and 'sent forth their little ones like a flock, and their children danced;' so that their land being small, they filled it brimful of inhabitants, till they were ready to overflow all its borders. And they looked this way and that way, and they said: 'What shall we do, for the people are many, and the land is small, and we are straitened for room?' So they called together the chief men of the nation, who held a great council to consider what they must do.

And behold, there arose amongst them a man unlike the men of the land, for they were short, and broad, and well formed in body, of a solemn and quiet countenance, and clad in peaceable garments; but he was tall and bony, and of a grim and hairy aspect. He had a great hard hand and a fierce eye; his clothes had a wild look; he had a sword by his side, a spear in his grasp, and his name was Van Manslaughter.

With a glad but savage gaze, he looked round upon the assembly, and said: 'Fellow-citizens! I marvel at your perplexity. You sit quietly at home, and know

nothing of the world; but I and my followers have pursued the deer and the boar far away into the forests of Germany. We have fought with the wolf and the bear, and, if need were, with the men of the woods; and enjoy our hunting, and eat of our prey with joy and jollity. Why sit ye here in a crowd, like sheep penned in a fold? We have seen the land that is next to ours, and we have been through it, to the length of it and to the breadth of it, and it is a good land. There are corn and wine: there are towns, and villages ready built to our hands. Let us arise and come suddenly upon them, and we shall not only get all these possessions, but we shall get great glory.' And when he had so said, he looked round him with exultation, and a crowd of dark hairy faces cried out: 'Ay, it is true! Let us arise and get great glory!'

But at that word there stood up Mynheer Kindermann, an old man—a very old man. He was of low stature, of a stout broad frame, and his hair, which was very white, hung down upon his shoulders; and his beard also, as white as driven snow, fell reverently upon his breast. That old man had a large and tranquil countenance; his features were bold, and of a very healthful complexion; his face, though of a goodly breadth, was of a striking length, for his forehead was bold and high, and his eyes had a pleasant fireside expression, as though he had been used only to behold his children and his children's children at their play.

As he arose there was a great silence, and he stood and sighed; and those who were near him heard him mutter in a low tone the word 'Glory,' but those afar off only saw his lips move. Then he said aloud: 'My brethren! I am glad that you are called upon to get great glory, but what is that glory to

which Mynheer Van Manslaughter calls you? In my youth, as some of you well know, I travelled far and wide with my merchandise; I have sojourned in all the countries that adjoin ours, and they are truly good countries, and full of people; but what of that? It is not people that we lack, it is land; and I should like to know how we are to take this land, that is full of people, and yet do those people no wrong! If we go to take that land, we shall find the people ready to defend their homes and their children; and if we fight in a bad cause, we shall probably get beaten, like thieves and robbers, for our pains—and is that glory? But if we are able to take that land, we must first kill or drive out those that cultivate it, and make it fit to live in—and is that glory? And if we take those towns, and villages, we must kill those who built them, or have lived in them. My brethren, I cannot think that is glory, but great disgrace and infamy, and a misery that, I trust, shall never come upon us.

'I have long looked about me, and I see that Heaven has given all those countries round us to whom He would, and they are full of people; they are full of rich fields and vineyards; they are full of towns for men and temples for God; they are full of warm, bright, happy homes, where there are proud fathers, and glad mothers, and innocent children, as amongst ourselves; and cursed be he who would disturb or injure them!

'But, my brethren, how shall we get glory, and, what is of more immediate necessity, how shall we get land to live in? I have been thinking of this, and it has come into my mind that as all the land is taken up, and as we cannot without great sin invade the land, that *we had better invade the sea*, where we can take, and wrong no man! And who does not know, that has looked

towards the sea, that there is much ground which seems properly to belong neither to the sea nor the land? Sometimes it is covered with the waters, and sometimes it is partly bare—a dreary, slimy, and profitless region, inhabited only by voracious crabs that make war upon one another—the stronger upon the weaker—and sea-fowl which come in like conquerors and subdue them, and devour them, and get what Van Manslaughter calls "great glory!" My brethren, let us invade the sea—let us get piles, and beams, and stones, and dig up the earth, and make a large mound which will shut out the sea, and we shall have land enough and to spare.'

## THE HONEST DUTCHMEN (2).

col'onies, bodies of persons who settle in another country, but continue subject to the parent state.
crev'ices, cracks, little openings.
indigna'tion, anger.
insignif'icant, very small, contemptible.
mar'vellous, strange, wonderful.
wot, know.

As he finished his speech there arose a deep murmur, that grew and grew till it spread among the people collected in thousands without, and at length became like the sound of the ocean itself; and then the people cried out: 'Yes, we will invade the sea!' and so it was decreed. Then began they with axes to fell wood; with levers and mattocks to wrench up stones; and with wagons, horses, and oxen, to lead them to the sea. Now, it being the time of low-water, and the tide being gone down very far, they began to dig up the earth and to make a mighty bank. So when the sea came up again, it saw the bank and the people upon it in great numbers, but it took no notice thereof. And it went

down and came up again, and they had pushed out the bank still further, and raised it higher, and secured it with beams, and piles, and huge stones, and it began to wonder. And it went down and came up again, and they had pushed the bank still further, so that in great amazement it said within itself: 'What are these insignificant creatures doing? Some great scheme is in their heads, but I wot not what; and one of these days I will come up and overturn their bank, and sweep both it and them away together.'

But at length, as it came up once on a time, it beheld that the bank was finished. It stretched across from land to land, and the sea was entirely shut out. Then was it filled with wonder that such little creatures had done so amazing a deed, and with great indignation that they had presumed to interrupt the progress of itself—the mighty sea, which stretched round the whole world, and was the greatest moving thing in it. Retreating in fury, it collected all its strength, and came with all its billows, and struck the bank in the midst, as with thunder. In a moment there appeared on the top of the mound, on the whole length of it, a swarm of little stout men as thick as a swarm of bees. Marvellous was it to see how that throng of little creatures was all astir, running here and running there; stopping up crevices, and repairing damages done by that vast and tremendous enemy, that, roaring and foaming, repeated its blows till the faces of the men were full of fear, and they said: 'Surely the mound will fall!' Then came the sea, swelling and raging more dreadfully than ever, and urged by a mighty wind, it thundered against the bank and burst it! The waters flowed triumphantly over all their old places, and many men perished.

Then went Van Manslaughter amongst the people with great joy, and many loud words, saying: 'See what has come of despising my counsel! See what glory your old counsellor has brought you to! Come now, follow me, and I will lead you to possessions where you need not fear the sea. Let us leave it to people this bog with fish. I am for no new-fangled schemes, but for the good old plan of fair and honourable wâr, which has been the highway to wealth and glory from the beginning of the world!'

Then began the people to be very sad, and to listen to his words; but Mynheer Kindermann called them again to him and bid them be of good heart, and to repair the bank to make it stronger, and to build towers upon it, and to appoint men to dwell in them that they might continually watch over and strengthen it. So the people took courage and did so, for they said: 'Let us take no man's goods, and let us do no murder.' Therefore they renewed the mound, and the sea came up in tenfold wrath and smote it worse than before, but it was all in vain. It failed not, save a little here and there, and the people set up a great shout, and cried: 'The mound will stand!'

Then did they begin to dig and drain, to plant trees, to build towns, and to lay out gardens, and it became a beautiful country. Then the inhabitants rejoiced, saying: 'Others have invaded lands and killed people, but we have hurt no man. We have only invaded the sea, and Heaven has made us out of it a good heritage!'

These are the people whose wealth and industry are known through the whole world. They have sent out colonies to the ends of the earth, and have got themselves the name of the Honest Dutchmen.

## LORD ULLIN'S DAUGHTER.

1.

A chieftain, to the Highlands bound,
Cries: 'Boatman, do not tarry!
And I'll give thee a silver pound
To row us o'er the ferry.'

2.

'Now, who be ye would cross Lochgyle,
This dark and stormy water?'
'Oh! I'm the chief of Ulva's isle,
And this Lord Ullin's daughter.

3.

'And fast before her father's men
Three days we've fled together;
For, should he find us in the glen,
My blood would stain the heather.

4.

'His horsemen hard behind us ride;
Should they our steps discover,
Then who will cheer my bonny bride
When they have slain her lover?'

5.

Out spoke the hardy island wight:
'I'll go, my chief—I'm ready:
It is not for your silver bright,
But for your winsome lady:

6.

'And, by my word, the bonny bird
In danger shall not tarry;
So, though the waves are raging white,
I'll row you o'er the ferry.'

7.

By this the storm grew loud apace,
The water-wraith was shrieking;
And in the scowl of heaven each face
Grew dark as they were speaking.

8.

But still as wilder blew the wind,
And as the night grew drearer,
Adown the glen rode armed men,
Their trampling sounded nearer.

9.

'Oh! haste thee, haste!' the lady cries,
'Though tempests round us gather;
I'll meet the raging of the skies,
But not an angry father.'

10.

The boat has left a stormy land,
A stormy sea before her—
When, oh! too strong for human hand,
The tempest gathered o'er her.

11.

And still they rowed amidst the roar
Of waters fast prevailing;
Lord Ullin reached that fatal shore,
His wrath was changed to wailing.

12.

For sore dismayed through storm and shade,
His child he did discover:
One lovely hand she stretched for aid,
And one was round her lover.

13.

'Come back! come back!' he cried in grief,
'Across this stormy water;
And I 'll forgive your Highland chief;
My daughter!—oh! my daughter!'

14.

'Twas vain: the loud waves lashed the shore,
Return or aid preventing;
The waters wild went o'er his child,
And he was left lamenting.

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## INFLUENCE OF MUSIC.

Orpheus with his lute made trees,
And the mountain-tops that freeze,
Bow themselves, when he did sing:
To his music, plants and flowers
Ever sprung; as sun and showers
There had made a lasting spring.

Everything that heard him play,
Even the billows of the sea,
Hung their heads, and then lay by—
In sweet music is such art:
Killing care and grief of heart
Fall asleep, or, hearing, die.

## PETER THE GREAT AND THE DESERTER.

The following is founded on an incident in the life of Peter the Great, Czar of Russia, who in 1697 went to Holland to learn the art of ship-building. He assumed the disguise and name of a common workman, was employed in the ship-yards at Saardam, and received wages like a common ship-carpenter.

burg'omaster, the chief magistrate of the burgh or city.
comfort'able.
discov'ered, found out.
inclina'tion.
independ'ent.
invita'tion.
myste'rious.
partic'ular.
ram'part, mound or wall around a fortified place.
ridic'ulous, to be laughed at.

### SCENE I.

PETER THE GREAT—STANMITZ.

*Peter.* (*Disguised as a carpenter.*) Well, before I quit this place, I may let you into my secret.

*Stanmitz.* And do you think of leaving us?

*Peter.* I have now been absent from my native country a twelvemonth. I have acquired some knowledge of ship-building—the object for which I came here—and it is time I should return home.

*Stanmitz.* Our master, Von Block, will be sorry to lose you, because you are the most industrious fellow in the yard; and I shall be sorry, because—because, Peter, I like you.

*Peter.* And I don't dislike you.

*Stanmitz.* Peter, I think I may venture to tell you a secret.

*Peter.* Why, surely you have done nothing to be ashamed of?

*Stanmitz.* No, not ashamed; but I'm considerably afraid. Know, then, that I was born at Moscow.

*Peter.* Well, there is no crime in being born at Moscow; besides, that was no fault of yours.

*Stanmitz.* That 's not it. Listen! It happened, one day, that a party of soldiers halted near my mother's hut; the commanding officer presently cast an eye on me, and was so very much taken with my appearance, that he requested I'd make one of his company. I was about to decline; but he assured me that the Czar Peter (our namesake, you know), having particular occasion for my services, would take it as an offence if I refused the invitation; so he forthwith clapped a musket on my shoulder, and marched me off.

*Peter.* Ay, you were enlisted.

*Stanmitz.* Enlisted! why, I can't say but I was. Now, I was always an independent sort of fellow, fond of my own way, and couldn't stomach being ordered about against my inclination.

*Peter.* (*Aside.*) So, so! This fellow is a deserter.

*Stanmitz.* I put up with it a long while, though; till, one bitter cold morning in December, just at three o'clock, I was roused from my comfortable, warm sleep, to turn out and mount guard on the bleak, blustering corner of a rampart, in the snow. It was too bad, wasn't it?

*Peter.* I don't doubt you would rather have been warm in bed.

*Stanmitz.* Well, as I couldn't keep myself warm, I laid down my musket and began to walk; then I began to run, and—will you believe it—I didn't stop running till I found myself five leagues away from the outposts!

*Peter.* So, then, you are a deserter!

*Stanmitz.* A deserter! You call that being a deserter,

do you? Well, putting this and that together, I shouldn't wonder if I were a deserter.

*Peter.* Do you know, my dear fellow, that if you are discovered you will be shot?

*Stanmitz.* I 've some such idea. Indeed, it occurred to me at the time; so, thinking it hardly worth while to be shot for being so short a distance as only five leagues away from my post, I made the best of my way to Saardam; and here I am.

*Peter.* This is an awkward affair indeed, and if the burgomaster were informed of it—— However, be assured your secret is safe in my keeping.

*Stanmitz.* I don't doubt you, for I suspect you 're in a similar scrape yourself.

*Peter.* I? Ridiculous!

*Stanmitz.* There 's something very mysterious about you, at anyrate. But, I say—you will keep my secret?

*Peter.* Oh! trust me for that.

*Stanmitz.* Because, if it should get to the ears of any of the agents of the Czar, I should be in rather a bad fix, you know.

*Peter.* The Czar shall know no more about it than he does now, if I can help it; so don't be afraid. He himself, they say, is rather fond of walking away from his post.

*Stanmitz.* Ha, ha! Is he? Then he has no business to complain of me for running away—eh?

*Peter.* You must look out for him, though. They say he has a way of finding out everything. Don't be too sure of your secret.

*Stanmitz.* Come, now; he 's in Russia, and I 'm in Holland; and I don't see where 's the danger, unless you mean to blab.

*Peter.* Fellow-workman, do you take me for a traitor?

*Stanmitz.* Not so, Peter; but if I am ever taken up here as a deserter, you will have been the only one to whom I have told my secret.

*Peter.* A fig for the Czar!

*Stanmitz.* Don't say that—he 's a good fellow, is Peter the Czar; and you 'll have to fight me if you say a word in his dispraise.

*Peter.* Oh, if that 's the case, I 'll say no more.

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## PETER THE GREAT AND THE DESERTER.

SCENE II.

STANMITZ—MRS STANMITZ—PETER THE GREAT—OFFICER.

**bewil'derment.**
**duc'at,** a gold coin = 9s. 4d., so called because first struck by a *duke.*
**ex'cellency.**
**famil'iar,** free.
**fright'ened.**
**gen'tleman.**
**interrupt'.**
**occa'sion.**
**opportu'nity.**
**realise',** to feel that it is real.
**sec'retaries,** public officers.
**superintend',** to have the charge of.
**won'derfully.**

*Stanmitz.* Well, mother, I mustn't be skulking about here in Moscow any longer. I must leave you, and go back to Holland to my trade. At the risk of my life I came here, and at the risk of my life I must go back.

*Mrs Stanmitz.* Ah! Michael, Michael, if it hadn't been for your turning deserter, you might have been a corporal by this time!

*Stanmitz.* Look you, mother, I was made a soldier against my will, and the more I saw of a soldier's life the more I hated it. As a poor journeyman carpenter, I am

at least free and independent; and if you will come with me to Holland, you shall take care of my wages and keep house for me.

*Mrs Stanmitz.* I should be a drag upon you, Michael. You will be wanting to get married by-and-by; moreover, it will be hard for me to leave the old home at my time of life.

*Stanmitz.* Some one is knocking at the door. Wait, mother, till I have concealed myself. (*Enter* PETER THE GREAT *disguised.*)

*Peter.* What, ho! comrade! No skulking! Come out from behind that screen! Didn't I see you through the window as I passed?

*Stanmitz.* Is it possible? Peter! My old fellow-workman! Give us your hand, my hearty! How came you to be here in Moscow? There is no ship-building going on so far inland.

*Peter.* No; but there is at St Petersburg, the new city that the Czar is building up.

*Stanmitz.* They say the Czar is in Moscow just now.

*Peter.* Yes, he passed through your street this morning.

*Stanmitz.* So I heard. But I didn't see him. I say, Peter, how did you find me out?

*Peter.* Why, happening to see your mother's sign over the door, it occurred to me, after I returned to the palace——

*Stanmitz.* The palace?

*Peter.* Yes; I always call the place where I put up a palace. It is a way I have.

*Stanmitz.* You always were a funny fellow, Peter!

*Peter.* As I was saying, it occurred to me that Mrs Stanmitz might be the mother or aunt of my old messmate; and so I put on this disguise——

*Stanmitz.* Ha, ha! Sure enough, it is a disguise—the disguise of a gentleman. Peter, where did you get such fine clothes?

*Peter.* Don't interrupt me, sir!

*Stanmitz.* Don't joke in that way again, Peter! Do you know you half-frightened me by the stern tone in which you said: 'Don't interrupt me, sir!' But I see how it is, Peter, and I thank you. You thought you could learn something of your old friend, and so stopped to inquire, and saw me through the window.

*Peter.* Ah! Stanmitz, many's the big log we have chopped at together, through the long summer day, in Von Block's ship-yard.

*Stanmitz.* That we have, Peter! Why not go back with me to Saardam?

*Peter.* I can get better wages at St Petersburg.

*Stanmitz.* If it weren't that I'm afraid of being overhauled for taking that long walk away from my post, I would go to St Petersburg with you.

*Peter.* How happened you to venture back here?

*Stanmitz.* Why, you must know that this old mother of mine wanted to see me badly; and then I had left behind here a sweetheart. Don't laugh, Peter. She has waited all this while for me; and the misery of it is that I am too poor to take her along with me yet. But next year, if my luck continues, I mean to return and marry her.

*Peter.* What if I should inform against you? I could make a pretty little sum by exposing a deserter.

*Stanmitz.* Don't joke on that subject! You'll frighten the old woman. Peter, old boy, I'm so glad to see you—— Halloo! Soldiers at the door! What does this mean? An officer? Peter, excuse me, but I must leave you.

*Peter.* Stay! I give you my word it is not you they want. They are friends of mine.

*Stanmitz.* Oh! if that's the case, I'll stay. But do you know one of those fellows looks wonderfully like my old commanding officer? (*Enter Officer.*)

*Officer.* A despatch from St Petersburg, your majesty, claiming your instant attention.

*Mrs Stanmitz.* Majesty!

*Stanmitz.* Majesty! I say, Peter, what does he mean by majesty?

*Officer.* Knave! Know you not that this is the Czar?

*Stanmitz.* What!—Eh?—This?—Nonsense! This is my old friend Peter.

*Officer.* Down on your knees, rascal, to Peter the Great, Czar of Russia!

*Mrs Stanmitz.* Oh! your majesty, your majesty! don't hang the poor boy! He knew no better!—he knew no better! He is my only son! Let him be whipped, but don't hang him!

*Stanmitz.* Nonsense, mother! This is only one of Peter's jokes. Ha, ha, ha! You keep it up well, though. And those are despatches you are reading, Peter!

*Officer.* Rascal! Dare you interrupt his majesty?

*Stanmitz.* Twice you've called me rascal. Don't you think that's being rather familiar? Peter, have you any objection to my pitching your friend out of the window?

*Officer.* Ha! Now I look closer, I remember you! Soldiers, arrest this fellow! He's a deserter!

*Stanmitz.* It's all up with me! And there stands Peter, as calm as if nothing had happened.

*Mrs Stanmitz.* I'm all in a maze! Good Mr Officer, spare the poor boy!

*Officer.* He must go before a court-martial. He must be shot.

*Mrs Stanmitz.* Oh! woe is me! woe is me! That ever my poor boy should be shot!

*Peter.* Officer, I have occasion for the services of your prisoner. Release him.

*Officer.* Your majesty's will is absolute.

*Stanmitz.* (*Aside.*) Majesty again? What does it all mean? A light breaks in upon me. There were rumours in Holland, when I left, that the Czar had been working in one of the ship-yards. Can my Peter be the emperor?

*Peter.* Stanmitz, you have my secret now.

*Stanmitz.* And you are——

*Peter.* The emperor! Rise, old woman; your son, Baron Stanmitz, is safe!

*Mrs Stanmitz.* Baron Stanmitz!

*Peter.* I want him to superintend my ship-yard at St Petersburg. No words. Prepare, both of you, to leave for the new city to-morrow. Baron Stanmitz, make that sweetheart of yours a baroness this very evening, and bring her with you. No words. I have business claiming my care, or I would stop and see the wedding. Here is a purse of ducats. One of my secretaries will call with orders in the morning. Farewell.

*Stanmitz.* O Peter! Peter!—I mean your majesty!—your majesty!—I 'm in such a bewilderment!

*Mrs Stanmitz.* Down on your knees, Michael!—I mean, Baron Stanmitz! Down on your knees!

*Stanmitz.* What! to my old friend, Peter—him that I used to wrestle with?—Excuse me, your majesty—I mean, friend Peter—Czar Peter—I can't begin to realise it! 'Tis all so like things we dream of.

*Peter.* Ha, ha! Good-bye, messmate! We shall meet

again in the morning. Commend me to your sweetheart. [*Exit.*

*Stanmitz.* Mr Officer, that court-martial you spoke of isn't likely to come off.

*Officer.* Baron, I am your very humble servant. I hope, baron, you will speak a good word for me to his majesty, when opportunity offers. I humbly take my leave of your excellency.

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## THE GLOVE AND THE LIONS.

1.

KING FRANCIS was a hearty king, and loved a royal sport,
And one day, as his lions strove, sat looking on the court:
The nobles filled the benches round, the ladies by their side,
And 'mongst them Count de Lorge, with one he hoped to make his bride:
And truly 'twas a gallant thing to see that crowning show,
Valour and love, and a king above, and the royal beasts below.

2.

Ramped and roared the lions, with horrid laughing jaws;
They bit, they glared, gave blows like beams, a wind went with their paws;
With wallowing might and stifled roar they rolled one on another,
Till all the pit, with sand and mane, was in a thund'rous smother;

The bloody foam above the bars came whizzing through the air;
Said Francis then: 'Good gentlemen, we're better here than there!'

3.

De Lorge's love o'erheard the king, a beauteous, lively dame,
With smiling lips, and sharp, bright eyes, which always seemed the same:
She thought: 'The Count, my lover, is as brave as brave can be;
He surely would do desperate things to shew his love of me!
King, ladies, lovers, all look on; the chance is wondrous fine;
I 'll drop my glove to prove his love; great glory will be mine!'

4.

She dropped her glove to prove his love; then looked on him and smiled;
He bowed, and in a moment leaped among the lions wild:
The leap was quick; return was quick; he soon regained his place;
Then threw the glove, but not with love, right in the lady's face!
'In truth,' cried Francis, 'rightly done!' and he rose from where he sat:
'No love,' quoth he, 'but vanity, sets love a task like that!'

# LESSONS ON ANIMALS.

## Birds.

*Birds of prey—Perchers—Climbers—Scrapers—Runners—Waders—Swimmers.*

Al'batross.
car'rion, dead *flesh*.
Cas'sowary.
Cockatoo', so called from its cry.
im'migrants, those migrating or removing into a country.
mas'ticate, chew.
migra'tion, moving from one country to another.
nox'ious, hurtful, injurious.
of'fal, anything waste, the parts of an animal unfit for use.
Paroquet (par-o-ket'), 'little Peter.'
prec'ipices, steep places.

Birds, like mammals, are warm-blooded animals. They are all produced from eggs, and their body is covered with feathers instead of hair or wool. Along with one pair of limbs and feet, their fore-limbs are, as a rule, in the form of wings adapted for flight. Birds have no teeth, and therefore cannot masticate their food, which is either torn by the beak or swallowed whole, and is reduced to a soft state in the stomach. Many birds migrate from one latitude to another, chiefly for the sake of obtaining a better supply of food. The summer immigrants that visit our island, as the Swallow, the Rail, the Cuckoo, are from tropical regions; while all winter visitants, as the Swan and Wild Goose, come from the north. Birds are of great utility to man, not only as an article of food, but also by keeping in check noxious animals, and in consuming carrion and other refuse. Birds are usually divided into seven orders, according to their habits.

BIRDS OF PREY are distinguished by hooked bills and strong claws. They live chiefly upon flesh, usually preying upon animals weaker than themselves. The most remarkable families of this order are Vultures; Hawks, Falcons, and Eagles; and Owls. Vultures feed chiefly on dead carcasses and offal. The Condor, the king of the vulture tribe, is peculiar to the Andes Mountains. Its

Condor.

wings, when expanded, extend to from ten to twelve feet. Borne on these wide-spread pinions, the condor ascends higher in the air than any other bird, being sometimes found at an elevation of ten thousand or fifteen thousand feet above the level of the ocean. The Golden Eagle is the largest and most powerful of the falcon tribe, and destroys quadrupeds as well as birds. He has hence been called the king of birds. Eagles build their nests

on lofty and secluded situations, among mountains and precipices, and resist with great courage any attack upon their young. Falcons proper are specially adapted to pursue and bring down their prey on the wing. The Osprey lives upon the sea-shore, and subsists chiefly upon fish. Owls live upon mice and small birds, which they hunt by night.

The order of PERCHING BIRDS comprises numerous varieties, including the Sparrow, Thrush, Swallow, Nightingale, Bullfinch, Magpie, Crow, and many others of the more familiar and smaller birds. They live chiefly upon grain and insects, and some of them, especially the Nightingale, possess wonderful powers of song. Among them are found two families remarkable for the beauty of their plumage—the Bird of Paradise, a native of New Guinea and the neighbouring islands, and the Humming-bird of America, regarded as the smallest of all the feathered tribes, some varieties being not larger than the humble-bee.

The order of CLIMBING BIRDS embraces the Woodpeckers and the Parrots. The Woodpecker is furnished with a long tongue, which it inserts into the chinks of trees in search of insects. Parrots, including Cockatoos, Paroquets, and the Macaws of America, are extensively diffused over the tropical regions. Most of them are adorned with gorgeous colours, and are remarkable for their power of imitating the human voice. The Toucans of America are remarkable for the enormous size of their bills.

The order of SCRAPERS, besides the Cock and his well-known and useful companion, the Hen, embraces the Peacock, Turkey, Guinea-fowl, Pheasant, Grouse, Partridge, Quail, and the numerous varieties of the Pigeon. In this

order are found most of the birds used for food, and most of those which are considered as game-birds.

The order of RUNNERS consists of large birds, with long limbs of great strength, but with scarcely any wings, being designed to scamper over wide plains in search of their food. They are the Ostrich of Africa and Arabia, from seven to eight feet in height, and so swift of foot

Ostrich.

as to be able to outstrip the fleetest horse; the Rhea, or American ostrich; the Emeu of Australia; the Cassowary of Molucca and New Guinea; and the Apteryx of New Zealand.

WADING BIRDS have long unfeathered legs, like stilts, enabling them to walk into shallow waters, there to catch fish and reptiles with their long bills. The order includes the Crane, remarkable for its migrations; the Heron, well known in Britain; the Bittern, the emblem of desolation, noted for its dismal booming; the Ibis, held in great veneration by the ancient Egyptians; the Stork, living on the tops of houses in Holland; the Snipe, Woodcock,

&c.; the Curlew, so named from its cry; the Water-hen, Coot, Corn-crake, and Rail; the Plovers; and the Lapwing, or 'peewit.' The Great Bustard is the largest of European birds.

The order SWIMMERS are generally fitted for living upon the sea or in rivers and lakes, having webbed feet, to enable them to move over the surface, and broad strong

Albatross.

bills to serve for making prey of the smaller animals living in the waters below. Their bodies are closely covered with feathers, and coated with a thick down next the skin. The order includes numerous creatures of various character, from the Duck and Goose, and the Teal and Gull, up to the gigantic Albatross, which often measures fifteen feet across the wings.

## BIRDS.

Birds—birds! ye are beautiful things,
With your earth-treading feet and your cloud-cleaving wings;
Where shall man wander, and where shall he dwell,
Beautiful birds, that ye come not as well?
Ye have nests on the mountain all rugged and stark,
Ye have nests in the forest all tangled and dark:
Ye build and ye brood 'neath the cottagers' eaves,
And ye sleep on the sod 'mid the bonnie green leaves;
Ye hide in the heather, ye lurk in the brake,
Ye dive in the sweet flags that shadow the lake:
Ye skim where the stream parts the orchard-decked land,
Ye dance where the foam sweeps the desolate strand.
Beautiful birds! ye come thickly around,
When the bud 's on the branch, and the snow 's on the ground;
Ye come when the richest of roses flush out,
And ye come when the yellow leaf eddies about.

Beautiful birds! how the schoolboy remembers
The warblers that chorused his holiday tune;
The robin that chirped in the frosty Decembers,
The blackbird that whistled through flower-crowned June.
That schoolboy remembers his holiday ramble,
When he pulled every blossom of palm he could see,
When his finger was raised as he stopped in the bramble,
With 'Hark! there 's the cuckoo; how close he must be.'

## THE HUMMING-BIRD.

**Am'azon**, a river in South America, the largest in the world.
**campane'ro**, a West Indian bird, whose note may be heard nearly three miles off like the toll of a distant bell.
**cay'man**, the American alligator or crocodile.
**change'ful.**
**joy'fulness.**
**La Plate**, a river in South America.
**palmet'to**, a species of palm.

1.

The humming-bird! the humming-bird!
So fairy-like and bright;
It lives among the sunny flowers,
A creature of delight!

2.

In the radiant islands of the East,
Where fragrant spices grow,
A thousand thousand humming-birds
Go glancing to and fro.

3.

Like living fires they flit about,
Scarce larger than a bee,
Among the broad palmetto leaves,
And through the fan-palm tree.

4.

And in those wild and verdant woods,
Where stately mosses tower,
Where hangs from branching tree to tree
The scarlet passion-flower;

5.

Where on the mighty river banks,
La Plate and Amazon,
The cayman, like an old tree trunk,
Lies basking in the sun;

6.

There builds her nest the humming-bird,
Within the ancient wood—
Her nest of silky cotton down—
And rears her tiny brood.

7.

She hangs it to a slender twig,
Where waves it light and free,
As the campanero tolls his song,
And rocks the mighty tree.

8.

All crimson is her shining breast,
Like to the red, red rose;
Her wing is the changeful green and blue
That the neck of the peacock shews.

9.

Thou happy, happy humming-bird,
No winter round thee lowers;
Thou never saw'st a leafless tree,
Nor land without sweet flowers.

10.

A reign of summer joyfulness
To thee for life is given;
Thy food, the honey from the flower,
Thy drink, the dew from heaven!

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## THE THRUSH'S NEST—A SONNET.

Within a thick and spreading hawthorn bush,
That overhung a molehill large and round,
I heard from morn to morn a merry thrush
Sing hymns of rapture, while I drank the sound
With joy; and oft an unintruding guest,
I watched her secret toils from day to day;
How true she warped the moss to form her nest,
And modelled it within with wood and clay.
And by-and-by, like heath-bells gilt with dew,
There lay her shining eggs as bright as flowers,
Ink-spotted over, shells of green and blue:
And there I witnessed in the summer hours,
A brood of Nature's minstrels chirp and fly,
Glad as the sunshine and the laughing sky.

## THE FARMER AND HIS THREE ENEMIES.

accost'ed, spoke to.
aggrava'tions, things which make heavier or worse.
commu'nity, the whole number.
compas'sion, pity, mercy.
for'aging, plundering food.
hypoc'risy, pretence.
im'pudence, rudeness, insolence.
obse'quious, cringing.
pen'itence, sorrow for a fault.
pi'teously, in such a way as to cause pity.
success'ful.
unperceived', not seen.

A wolf, a fox, and a hare, happened one evening to be foraging in different parts of a farmer's yard. Their first effort was pretty successful, and they returned in safety to their several quarters: however, not so happy as to be unperceived by the farmer's watchful eye, who, placing several kinds of snares, made each his prisoner in the next attempt. He first took the hare to task, who confessed she had eaten a few turnip-tops, merely to satisfy her hunger; besought him piteously to spare her life, and promised never to enter his grounds again. He then accosted the fox, who, in a fawning, obsequious tone, protested that he came into his premises through no other motive than pure good-will, to restrain the hares, and other vermin, from the plunder of his corn; and that, whatever evil tongues might say, he had too great a regard both for him and for justice to be in the least capable of any dishonest action. He last of all examined the wolf, what business brought him within the borders of a farmer's yard? The wolf very impudently declared it was with a view of destroying his lambs, to which he had an undoubted right: that the farmer himself was the only thief, who robbed the community of wolves of what was meant to be their proper food. That this, at least, was

his opinion; and whatever fate attended him, he should not scruple to risk his life in the pursuit of his lawful prey.

The farmer having heard their pleas, determined the cause in the following manner: 'The hare,' said he, 'deserves compassion for the penitence she shews, and the humble confession she has made: as for the fox and wolf, let them be hanged together; criminals alike with respect to the fact, they have alike heightened their equal guilt by the aggravations of hypocrisy and of impudence.'

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## SIR ISAAC NEWTON.

**attrac'tion**, a drawing to.
**curios'ity**, something curious or uncommon.
**discov'eries**, things found out.
**endeav'ours**, attempts.
**gravita'tion**, weight.
**mathemat'ical**, relating to mathematics or the science of number and quantity.
**philos'opher**, a lover of wisdom or knowledge, a man of great learning.
**ven'erate**, regard with veneration or respect.

Men of great learning and talent, whom all people admire and praise, are often found to be more modest than persons of inferior qualities. Sir Isaac Newton, the eminent philosopher, was one of those great, and at the same time modest men.

When a little boy at school, he surprised everybody by the curious little machines which he made with his own hands. He had a number of saws, hatchets, hammers, and other tools, which he used very cleverly. A windmill being put up near the place where he lived, he frequently went to look at it, and pried into every part of it, till he became thoroughly acquainted with it, and

the way in which it moved. He then began with his knife, and saws, and hammer, and made a small windmill, exactly like the large one: it was a very neat and curious piece of workmanship. He sometimes set it upon the house-top, that the wind might turn it round. He also contrived to cause a mouse to turn his mill. This little animal being put inside a hollow wheel, its endeavours to get forward turned the wheel, and set the machinery in motion. There was also some corn placed above the wheel, and when the mouse tried to get at the corn, it made the mill go round.

Having got an old box from a friend, he made it into a water-clock—that is, a clock driven by a slow fall of water. It was very like our common clocks, but much less, being only about four feet high. There was a dial-plate at the top, with figures of the hours. The hour-hand was turned by a piece of wood, which either fell or rose by water dropping upon it. This stood in the room where he lay, and he took care, every morning, to supply it with plenty of water. It pointed out the hours so well, that the people in the house would go to see what was the hour by it. It was kept in the house as a curiosity long after Isaac went to college. The room in which Isaac lodged was full of drawings of birds, beasts, men, ships, and mathematical figures, all neatly made upon the wall with charcoal.

When Isaac grew a little older, and went to college, he had a great desire to know something about the air, the water, the tides, and the sun, moon, and stars. One day, when he was sitting alone in his garden, an apple happened to fall from a tree to the ground. He then began to ask himself, what is the cause of the apple's falling down? Is it from some power or force in the

apple itself, or is the power in the earth which draws the apple down? When he had long thought about this subject, he found out that it was the earth that attracted, or drew the apple towards it, and that this power of attraction is one of the laws of nature. By it, loose objects are retained upon the surface of the earth, instead of flying abroad through space. It is attraction which gives weight to objects; hence it is sometimes called gravitation, which means nearly the same thing as weight. Isaac Newton also discovered that all objects whatever have an attraction for each other, and always in proportion to their size, and the distance at which they are placed. Thus the moon, though a large globe, is subject to the attraction of the earth, and the planets are subject to the attraction of the sun. And it is by attraction that they are all made to keep their proper distances from each other. These discoveries were justly considered as among the most important ever made; and reflecting men will ever venerate the name of Newton for his having made them.

Isaac Newton was also the first who shewed that every ray of light from the sun consists of seven different colours, and he made known many other curious and wonderful things which were never known before. He was of a mild and equal temper, and was seldom or never seen in a passion. One day he was called out of his study, where all his papers and writings were lying upon a table. His dog Diamond happened to jump upon the table, and overturned a lighted candle, which set fire to all his papers, and consumed them in a few moments. In this way he lost the fruit of the labour of many years. But when he came into his study, and saw what had happened, he did not strike the little dog, but only said:

'Ah, Diamond, Diamond! thou little knowest the mischief thou hast done!' Though Isaac Newton was a very wise and learned man, he was not proud of his learning, but was very meek and humble. He was kind to all, even to the poorest and meanest men. Though he was wiser than most other men, yet he said, a little before he died, that all his knowledge was as nothing when compared with what he had yet to learn. He was sometimes so much engaged in thinking, that his dinner was often three hours ready for him before he could be brought to table. He died in the year 1727, at the age of eighty-five.

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## THE FAIRY TO PUCK.

Over hill, over dale,
  Thorough bush, thorough briar,
Over park, over pale,
  Thorough flood, thorough fire,
I do wander every where,
Swifter than the moon's sphere;
And I serve the fairy queen,
To dew her orbs upon the green;
The cowslips tall her pensioners be;
In their gold coats spots you see;
Those be rubies, fairy favours,
In those freckles live their savours.
I must go seek some dew-drops here,
And hang a pearl in every cowslip's ear.

*Witches.*—'All hail! Macbeth!'

## MACBETH (1).

**abhor'rent**, causing one to shrink from it with horror.
**chop'py**, full of chops or cracks.
**com'pass**, obtain.
**compunc'tion**, pricking of conscience.
**condescen'sion**, kindly feeling to inferiors.
**frus'trated**, prevented from being carried out.
**hospital'ity**, kindness to visitors.
**imagina'tions.**
**inor'dinate**, beyond bounds.
**intox'icated**, drunk.
**lit'erally**, to the letter.
**mirac'ulously.**
**phan'tasm**, an appearance, a fancied vision.
**scru'pulous**, having a conscience.
**weird**, skilled in witchcraft.

When Duncan the Meek reigned King of Scotland, there lived a great thane, or lord, called Macbeth. This Macbeth was a near kinsman to the king, and in great esteem at court for his valour and conduct in the wars; an example of which he had lately given, in defeating a rebel army assisted by the troops of Norway in terrible numbers.

The two Scottish generals, Macbeth and Banquo, returning victorious from this great battle, their way lay over a blasted heath, where they were stopped by the strange appearance of three figures like women, except that they had beards, and their withered skins and wild attire made them look not like any earthly creatures. Macbeth first addressed them, when they, seemingly offended, laid each one her choppy finger upon her skinny lips, in token of silence; and the first of them saluted Macbeth with the title of Thane of Glamis. The general was not a little startled to find himself known by such creatures; but how much more, when the second of them followed up that salute by giving him the title of Thane of Cawdor, to which honour he had no pretensions; and again the third bid him, 'All hail! king that shall be hereafter!' Such a prophetic greeting might well amaze him, who knew that while the king's sons lived he could not hope to succeed to the throne. Then turning to Banquo, they pronounced him, in a sort of riddling terms, to be *lesser than Macbeth and greater! not so happy, but much happier!* and prophesied that though he should never reign, yet his sons after him should be kings in Scotland. They then turned into air, and vanished; by which the generals knew them to be the weird sisters, or witches.

While they stood pondering on the strangeness of this adventure, there arrived certain messengers from the king, who were empowered by him to confer upon Macbeth the dignity of Thane of Cawdor. An event so miraculously corresponding with the prediction of the witches astonished Macbeth, and he stood wrapped in amazement, unable to make reply to the messengers, and in that point of time, swelling hopes arose in his mind, that the prediction of

the third witch might in like manner have its accomplishment, and that he should one day reign king in Scotland.

Turning to Banquo, he said: 'Do you not hope that your children shall be kings, when what the witches promised to me has so wonderfully come to pass?'

'That hope,' answered the general, 'might enkindle you to aim at the throne; but oftentimes these ministers of darkness tell us truths in little things, to betray us into deeds of greatest consequence.'

But the wicked suggestions of the witches had sunk too deep into the mind of Macbeth to allow him to attend to the warnings of the good Banquo. From that time he bent all his thoughts how to compass the throne of Scotland.

Macbeth had a wife, to whom he communicated the strange prediction of the weird sisters, and its partial accomplishment. She was a bad ambitious woman, and so as her husband and herself could arrive at greatness, she cared not much by what means. She spurred on the reluctant purpose of Macbeth, who felt compunction at the thoughts of blood, and did not cease to represent the murder of the king as a step absolutely necessary to the fulfilment of the flattering prophecy.

It happened at this time that the king, who, out of his royal condescension, would oftentimes visit his principal nobility upon gracious terms, came to Macbeth's house, attended by his two sons, Malcolm and Donalbain, and a numerous train of thanes and attendants, the more to honour Macbeth for the triumphal success of his wars.

The castle of Macbeth was pleasantly situated, and the air about it was sweet and wholesome, which appeared by the nests which the martlet, or swallow, had built under all the jutting friezes and buttresses of the building,

wherever it found a place of advantage; for where those birds most breed and haunt, the air is observed to be delicate. The king entered well pleased with the place, and not less so with the attentions and respect of his honoured hostess, Lady Macbeth, who had the art of covering treacherous purposes with smiles; and could look like the innocent flower, while she was indeed the serpent under it.

The king, being tired with his journey, went early to bed, and in his state-room two grooms of his chamber (as was the custom) slept beside him. He had been unusually pleased with his reception, and had made presents before he retired to his principal officers; and among the rest, had sent a rich diamond to Lady Macbeth, greeting her by the name of his most kind hostess.

Now was the middle of night, when over half the world nature seems dead, and wicked dreams abuse men's minds asleep, and none but the wolf and the murderer is abroad. This was the time when Lady Macbeth waked to plot the murder of the king. She would not have undertaken a deed so abhorrent to her sex, but that she feared her husband's nature, that it was too full of the milk of human kindness to do a contrived murder. She knew him to be ambitious, but withal to be scrupulous, and not yet prepared for that height of crime which commonly in the end accompanies inordinate ambition. She had won him to consent to the murder, but she doubted his resolution; and she feared that the natural tenderness of his disposition (more humane than her own) would come between, and defeat the purpose. So with her own hands armed with a dagger, she approached the king's bed; having taken care to ply the grooms of his chamber so with wine, that they slept intoxicated, and careless of their

charge. There lay Duncan, in a sound sleep after the fatigues of his journey, and as she viewed him earnestly, there was something in his face as he slept which resembled her own father; and she had not the courage to proceed.

She returned to confer with her husband. His resolution had begun to stagger. He considered that there were strong reasons against the deed. In the first place, he was not only a subject, but a near kinsman to the king; and he had been his host and entertainer that day, whose duty, by the laws of hospitality, it was to shut the door against his murderers, nor bear the knife himself. Then he considered how just and merciful a king this Duncan had been, how clear of offence to his subjects, how loving to his nobility, and in particular to him; that such kings are the peculiar care of Heaven, and their subjects doubly bound to revenge their deaths. Besides, by the favours of the king, Macbeth stood high in the opinion of all sorts of men, and how would those honours be stained by the reputation of so foul a murder!

In these conflicts of the mind Lady Macbeth found her husband inclining to the better part, and resolving to proceed no further. But she being a woman not easily shaken from her evil purpose, began to pour in at his ears words which infused a portion of her own spirit into his mind, assigning reason upon reason why he should not shrink from what he had undertaken; how easy the deed was; how soon it would be over; and how the action of one short night would give to all their nights and days to come a sovereign sway and royalty! Then she threw contempt on his change of purpose, and accused him of fickleness and cowardice; and declared that she had given suck, and knew how tender it was to love the

babe that milked her, but she would, while it was smiling in her face, have plucked it from her breast, and dashed its brains out if she had so sworn to do it, as he had sworn to perform that murder. Then she added, how practicable it was to lay the guilt of the deed upon the drunken sleepy grooms. And with the valour of her tongue she so chastised his sluggish resolutions, that he once more summoned up courage to the bloody business.

So, taking the dagger in his hand, he softly stole in the dark to the room where Duncan lay; and as he went he thought he saw another dagger in the air, with the handle towards him, and on the blade and at the point of it drops of blood; but when he tried to grasp at it, it was nothing but air, a mere phantasm proceeding from his own hot and oppressed brain and the business he had in hand.

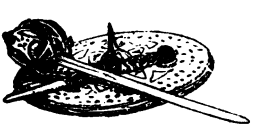
Getting rid of this fear, he entered the king's room, and despatched him with one stroke of his dagger. Just as he had done the murder, one of the grooms, who slept in the chamber, laughed in his sleep, and the other cried 'Murder,' which woke them both; but they said a short prayer; one of them said 'God bless us!' and the other answered 'Amen;' and addressed themselves to sleep again. Macbeth, who stood listening to them, tried to say 'Amen,' when the fellow said 'God bless us!' but, though he had most need of a blessing, the word stuck in his throat, and he could not pronounce it.

Again he thought he heard a voice which cried: 'Sleep no more; Macbeth doth murder sleep, the innocent sleep, that nourishes life.' Still it cried: 'Sleep no more,' to all the house. 'Glamis hath murdered sleep, and therefore Cawdor shall sleep no more, Macbeth shall sleep no more.'

With such horrible imaginations Macbeth returned to his listening wife, who began to think he had failed of his purpose, and that the deed was somehow frustrated. He came in so distracted a state, that she reproached him with his want of firmness, and sent him to wash his hands of the blood which stained them, while she took his dagger, with purpose to stain the cheeks of the grooms with blood, to make it seem their guilt.

Morning came, and with it the discovery of the murder, which could not be concealed; and though Macbeth and his lady made great show of grief, and the proofs against the grooms (the dagger being produced against them and their faces smeared with blood) were sufficiently strong, yet the entire suspicion fell upon Macbeth, whose inducements to such a deed were so much more forcible than such poor silly grooms could be supposed to have; and Duncan's two sons fled. Malcolm, the eldest, sought for refuge in the English court; and the youngest, Donalbain, made his escape to Ireland.

The king's sons, who should have succeeded him, having thus vacated the throne, Macbeth as next heir was crowned king, and thus the prediction of the weird sisters was literally accomplished.



## MACBETH (2).

**acclama'tions**, shouts of applause.
**al'ienated**, caused to be drawn away.
**averred'**, declared as true.
**bode'ments**, signs or statements regarding the future.
**conspir'acies**, plots against his life.
**equiv'ocal**, capable of more than one meaning.
**impreg'nable**, not to be taken.
**ingred'ients**, the things mixed together to form the charm.
**is'sue**, children, posterity.
**machina'tions**, artful designs.
**poster'ity**, those coming after.
**recruits'**, newly enlisted soldiers.
**signif'icant**, full of meaning.
**vul'nerable**, capable of being wounded.
**weird**.

Though placed so high, Macbeth and his queen could not forget the prophecy of the weird sisters, that, though Macbeth should be king, yet not his children, but the children of Banquo, should be kings after him. The thought of this, and that they had defiled their hands with blood, and done so great crimes, only to place the posterity of Banquo upon the throne, so rankled within them, that they determined to put to death both Banquo and his son, to make void the predictions of the weird sisters, which in their own case had been so remarkably brought to pass.

For this purpose they made a great supper, to which they invited all the chief thanes; and among the rest, with marks of particular respect, Banquo and his son Fleance were invited. The way by which Banquo was to pass to the palace that night, was beset by murderers appointed by Macbeth, who stabbed Banquo; but in the scuffle Fleance escaped. From that Fleance descended a race of monarchs who afterwards filled the Scottish throne, ending with James VI. of Scotland and I. of England, under whom the two crowns of England and Scotland were united.

At supper the queen, whose manners were in the highest degree affable and royal, played the hostess with a gracefulness and attention which conciliated every one present, and Macbeth discoursed freely with his thanes and nobles, saying that all that was honourable in the country was under his roof, if he had but his good friend Banquo present, whom yet he hoped he should rather have to chide for neglect, than to lament for any mischance. Just at these words the ghost of Banquo, whom he had caused to be murdered, entered the room, and placed himself on the chair which Macbeth was about to occupy. Though Macbeth was a bold man, and one that could have faced the evil one without trembling, at this horrible sight his cheeks turned white with fear, and he stood quite unmanned with his eyes fixed upon the ghost. His queen and all the nobles, who saw nothing, but perceived him gazing (as they thought) upon an empty chair, took it for a fit of distraction; and she reproached him, whispering that it was but the same fancy which had made him see the dagger in the air when he was about to kill Duncan. But Macbeth continued to see the ghost, and gave no heed to all they could say, while he addressed it with distracted words, yet so significant, that his queen, fearing the dreadful secret would be disclosed, in great haste dismissed the guests, excusing the infirmity of Macbeth as a disorder he was often troubled with.

To such dreadful fancies Macbeth was subject. His queen and he had their sleeps afflicted with terrible dreams, and the blood of Banquo troubled them not more than the escape of Fleance, whom now they looked upon as father to a line of kings who should keep their posterity out of the throne. With these miserable thoughts they

found no peace, and Macbeth determined once more to seek out the weird sisters, and know from them the worst.

He sought them in a cave upon the heath, where they, who knew by foresight of his coming, were engaged in preparing their dreadful charms, by which they conjured up infernal spirits to reveal to them futurity. Their horrid ingredients were toads, bats, and serpents, the eye of a newt, and the tongue of a dog, the leg of a lizard, and the wing of the night-owl, the scale of a dragon, the tooth of a wolf, the maw of the ravenous salt-sea shark, the mummy of a witch, the root of the poisonous hemlock (this, to have effect, must be digged in the dark), the gall of a goat, and the liver of a Jew, with slips of the yew-tree that roots itself in graves, and the finger of a dead child; all these were set on to boil in a great kettle or caldron, which as fast as it grew too hot, was cooled with a baboon's blood; to these they poured in the blood of a sow that had eaten her young, and they threw into the flame the grease that had sweaten from a murderer's gibbet. By these charms they bound the infernal spirits to answer their questions.

It was demanded of Macbeth, whether he would have his doubts resolved by them, or by their masters, the spirits. He, nothing daunted by the dreadful ceremonies which he saw, boldly answered: 'Where are they?—let me see them.' And they called the spirits, which were three. And the first arose in the likeness of an armed head, and he called Macbeth by name, and bid him beware of the Thane of Fife, for which caution Macbeth thanked him; for Macbeth had entertained a jealousy of Macduff, the Thane of Fife.

And the second spirit arose in the likeness of a bloody child, and he called Macbeth by name, and bid him have

no fear, but laugh to scorn the power of man, for none of woman born should have power to hurt him; and he advised him to be bloody, bold, and resolute. 'Then live, Macduff!' cried the king; 'what need I fear of thee? But yet I will make assurance doubly sure. Thou shalt not live; that I may tell pale-hearted Fear it lies, and sleep in spite of thunder.'

That spirit being dismissed, a third arose in the form of a child crowned, with a tree in his hand. He called Macbeth by name, and comforted him against conspiracies, saying, that he should never be vanquished, until the wood of Birnam to Dunsinane Hill should come against him. 'Sweet bodements! good!' cried Macbeth; 'who can unfix the forest, and move it from its earth-bound roots? I see I shall live the usual period of man's life, and not be cut off by a violent death. But my heart throbs to know one thing. Tell me, if your art can tell so much, if Banquo's issue shall ever reign in this kingdom?' Here the caldron sunk into the ground, and a noise of music was heard, and eight shadows, like kings, passed by Macbeth, and Banquo last, who bore a glass which shewed the figures of many more, and Banquo all bloody smiled upon Macbeth, and pointed to them; by which Macbeth knew, that these were the posterity of Banquo, who should reign after him in Scotland; and the witches, with a sound of soft music, and with dancing, making a show of duty and welcome to Macbeth, vanished. And from this time the thoughts of Macbeth were all bloody and dreadful.

The first thing he heard when he got out of the witches' cave, was, that Macduff, Thane of Fife, had fled to England, to join the army which was forming against him under Malcolm, the eldest son of the late king, with

intent to displace Macbeth, and set Malcolm, the right heir, upon the throne. Macbeth, stung with rage, set upon the castle of Macduff, and put his wife and children, whom the thane had left behind, to the sword, and extended the slaughter to all who claimed the least relationship to Macduff.

These and such-like deeds alienated the minds of all his chief nobility from him. Such as could, fled to join with Malcolm and Macduff, who were now approaching with a powerful army which they had raised in England; and the rest secretly wished success to their arms, though, for fear of Macbeth, they could take no active part. His recruits went on slowly. Everybody hated the tyrant, nobody loved or honoured him, but all suspected him, and he began to envy the condition of Duncan, whom he had murdered, who slept soundly in his grave, against whom treason had done its worst; steel nor poison, domestic malice nor foreign levies, could hurt him any longer.

While these things were acting, the queen, who had been the sole partner in his wickedness, in whose bosom he could sometime seek a momentary repose from those terrible dreams which afflicted them both nightly, died, it is supposed by her own hands, unable to bear the remorse of guilt, and public hate; by which event he was left alone, without a soul to love or care for him, or a friend to whom he could confide his wicked purposes.

He grew careless of life, and wished for death; but the near approach of Malcolm's army roused in him what remained of his ancient courage, and he determined to die (as he expressed it) 'with armour on his back.' Besides this, the hollow promises of the witches had filled him with false confidence, and he remembered the

sayings of the spirits, that none of woman born was to hurt him, and that he was never to be vanquished till Birnam Wood should come to Dunsinane, which he thought could never be. So he shut himself up in his castle, whose impregnable strength was such as defied a siege; here he sullenly waited the approach of Malcolm, when, upon a day, there came a messenger to him, pale and shaking with fear, almost unable to report that which he had seen; for he averred, that as he stood upon his watch on the hill, he looked towards Birnam, and to his thinking the wood began to move! 'Liar and slave,' cried Macbeth, 'if thou speakest false, thou shalt hang alive upon the next tree, till famine end thee. If thy tale be true, I care not if thou dost as much by me;' for Macbeth now began to faint in resolution, and to doubt the equivocal speeches of the spirits. He was not to fear, till Birnam Wood should come to Dunsinane; and now a wood did move! 'However,' said he, 'if this which he avouches be true, let us arm and out. There is no flying hence, nor staying here. I begin to be weary of the sun, and wish my life at an end.' With these desperate speeches he sallied forth upon the besiegers, who had now come up to the castle.

The strange appearance, which had given the messenger an idea of a wood moving, is easily solved. When the besieging army marched through the wood of Birnam, Malcolm, like a skilful general, instructed his soldiers to hew down every one a bough and bear it before him, by way of concealing the true numbers of his host. This marching of the soldiers with boughs had at a distance the appearance which had frightened the messenger. Thus were the words of the spirit brought to pass, in a sense different from that in which Macbeth had

understood them, and one great hold of his confidence was gone.

And now a severe skirmishing took place, in which Macbeth, though feebly supported by those who called themselves his friends, but in reality hated the tyrant and inclined to the party of Malcolm and Macduff, yet fought with the extreme of rage and valour, cutting to pieces all who were opposed to him, till he came to where Macduff was fighting. Seeing Macduff, and remembering the caution of the spirit who had counselled him to avoid Macduff above all men, he would have turned, but Macduff, who had been seeking him through the whole fight, opposed his turning, and a fierce contest ensued; Macduff giving him many foul reproaches for the murder of his wife and children. Macbeth, whose soul was charged enough with blood of that family already, would still have declined the combat; but Macduff still urged him to it, calling him tyrant, murderer, hell-hound, and villain.

Then Macbeth remembered the words of the spirit, how none of woman born should hurt him; and smiling confidently, he said to Macduff: 'Thou losest thy labour, Macduff. As easily thou mayest impress the air with thy sword, as make me vulnerable. I bear a charmed life, which must not yield to one of woman born.'

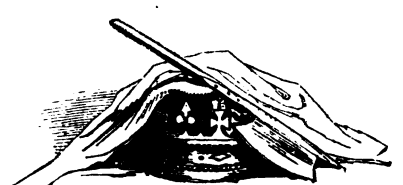
'Despair thy charm,' said Macduff, 'and let that lying spirit, whom thou hast served, tell thee, that Macduff was never born of woman, never as the ordinary manner of men is to be born, but was untimely taken from his mother.'

'Accursed be the tongue which tells me so,' said the trembling Macbeth, who felt his last hold of confidence give way; 'and let never man in future believe the lying

equivocations of witches and juggling spirits, who deceive us in words which have double senses, and while they keep their promise literally, disappoint our hopes with a different meaning. I will not fight with thee.'

'Then live!' said the scornful Macduff; 'we will have a show of thee, as men show monsters, and a painted board, on which shall be written: "Here men may see the tyrant!"'

'Never,' said Macbeth, whose courage returned with despair; 'I will not live to kiss the ground before young Malcolm's feet, and to be baited with the curses of the rabble. Though Birnam Wood be come to Dunsinane, and thou opposed to me who wast never born of woman, yet will I try the last.' With these frantic words he threw himself upon Macduff, who after a severe struggle in the end overcame him, and cutting off his head, made a present of it to the young and lawful king, Malcolm; who took upon him the government which, by the machinations of the usurper, he had so long been deprived of, and ascended the throne of Duncan the Meek amid the acclamations of the nobles and the people.



## THE FAIRY QUEEN.

Come, now a roundel, and a fairy song;
Then, for the third part of a minute, hence;
Some, to kill cankers in the musk-rose buds;
Some, war with rear-mice for their leathern wings,
To make my small elves coats; and some, keep back
The clamorous owl, that nightly hoots, and wonders
At our quaint spirits: Sing me now asleep:
Then to your offices, and let me rest.

SONG.

You spotted snakes, with double tongue,
Thorny hedge-hogs, be not seen;
Newts, and blind-worms, do no wrong;
Come not near our fairy queen.
Weaving spiders, come not here:
Hence, you long-legged spinners, hence;
Beetles black, approach not near;
Worm, nor snail, do no offence.

*Chorus.*

Philomel, with melody,
Sing in our sweet lullaby;
Lulla, lulla, lullaby; lulla, lulla, lullaby;
Never harm, nor spell, nor charm,
Come our lovely lady nigh;
So, good night, with lullaby.

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## THE MARINER'S CHILD.

1.

Oh, weep no more, sweet mother,
Oh, weep no more to-night;
And only watch the sea, mother,
Beneath the morning light.

2.

Then the bright blue sky is joyful,
And the bright blue sky is clear,
And I can see, sweet mother,
To kiss away your tear.

3.

But now the wind goes wailing
O'er the dark and trackless deep;
And I know your grief, sweet mother,
Though I only hear you weep.

4.

My father's ship will come, mother,
In safety o'er the main;
When the grapes are dyed with purple,
He will be back again.

5.

The vines were but in blossom,
When he bade me watch them grow;
And now the large leaves, mother,
Conceal their crimson glow.

6.

He'll bring us shells and sea-weed,
And birds of shining wing;
But what are these, dear mother!
It is himself he'll bring.

7.

I'll watch with thee, sweet mother,
But the stars fade from my sight;
Come, come and sleep, dear mother—
Oh, weep no more to-night.

# LESSONS ON ANIMALS.

## Reptiles.

*Crocodiles—Lizards—Serpents—Turtles.*

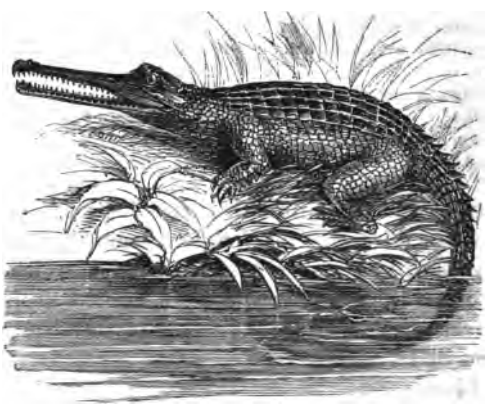
**Al'ligator.**
**amphīb'ians**, animals capable of living both on land and in water.
**archipel'ago**, a sea abounding in islands.
**Chameleon** (ka-mēl'yun), 'the ground-lion.'
**compar'atively**, when compared with others.
**Croc'odile.**
**Ga'vial.**
**Igua'na.**
**impen'etrable**, that cannot be pierced.
**respira'tion**, breathing.

Reptiles, so called from their creeping mode of walking, form a third class of Vertebrate animals. They are distinguished by a slow mode of respiration, which causes their bodies to be colder and more inactive than those of the Mammals and Birds. Many of them are wholly without limbs. There are four orders of reptiles—Crocodiles, Lizards, Serpents, and Turtles.

The Crocodiles are inhabitants of the rivers and fresh waters of countries in the neighbourhood of the equator. They are formidable animals, attaining the length of twenty or thirty feet. They have a large head and long jaws, and their back and tail are covered with plates impenetrable to a musket-ball. Their eggs, which are about the size of those of a goose, are deposited in the sand, and hatched by the sun. The order contains three kinds—the true Crocodile, which abounds in the Nile; the Alligator, found in the rivers and swamps of North

and South America; and the Gavial of India and the islands of the Eastern Archipelago.

LIZARDS proper are comparatively small and harmless animals. The Iguana, a native of South America, resembles the alligator, but is used as food. With this family is classed the Dragon, which, instead of being a large, fierce, and winged animal, as represented by ancient writers, is a small innocent creature, possessing a membrane like that of a bat, which enables it to make long



Gavial.

leaps. The Chameleon, a small creature living upon flies, and having the power of changing its colour, is another member of this order.

SERPENTS, snakes, and vipers are the only vertebrated animals which do not possess legs, their body from head to tail being a mere succession of rib and backbone. By means of contractions of their ribs they can move in any direction they please. Many creatures of this order have

poison-fangs, which render them very noxious to man. The common viper of this country is comparatively a small animal, but in warm countries there are serpents, such as the Boa Constrictors, many of them twenty feet and upwards in length, capable of killing and eating such animals as deer, sheep, and oxen. The common viper can, however, inflict a dangerous bite. It is the only venomous reptile found in Britain.

TURTLES are enveloped in a hard shell, from which no part projects but the head, tail, and four feet. They chiefly inhabit warm countries, and are designed for sea-life. The Green Turtle is prized for the delicious food which it yields. Another species is remarkable for its beautifully marked horny plates, which form the *tortoise-shell* of commerce, the finest being brought from the Indian Archipelago. Tortoises are land animals, and their armour is thicker and stronger in proportion to their size than that of the aquatic turtles.

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## AMPHIBIANS.

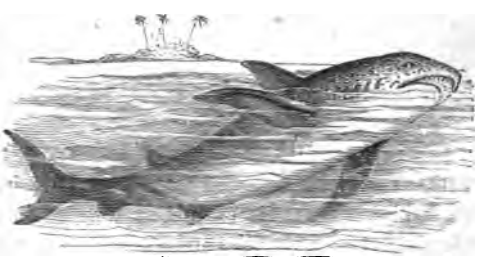
AMPHIBIANS may be regarded as intermediate in their structure, habits, and modes of life, as well as in many of their forms, between Reptiles and Fishes. They receive their name from their living in water at one time and afterwards on land. To this class belong the Toad, the various kinds of Frogs, the Salamander, and the Newt.

## LESSONS ON ANIMALS.

### FISHES.

**caviare (kav-i-ar')**, an article of food made from the salted roe of the sturgeon.
**dor'mant**, *sleeping.*
**i'singlass**, a substance used in clarifying liquids.
**os'seous**, bony.
**vora'cious**, *eager to devour.*

Fishes, like reptiles, are cold-blooded animals. They live exclusively in water, and are furnished with gills, by which they breathe, and with fins, by means of which they make their way through the water.



White Shark.

They are divided into six orders: (1.) *Mud-fishes*, the nearest to the Amphibians. They inhabit the marshes of the rivers Gambia and Amazon, and are able in the dry season to bury themselves in the mud, where they remain dormant until the return of the rainy season. (2.) *Sharks*

and *Rays*, of which the most noted is the White Shark, which has been known to attain a length of thirty feet. (3.) *The Sturgeons*, of the Black and Caspian Seas, extremely valuable to man, their roe providing the caviare so much esteemed in Russia, and the air-bladder furnishing isinglass. (4.) *Osseous fishes* include the Eel tribe; the Carp, Barbel, the Gold-fish, introduced into this country from China; the voracious Pikes; Salmon and Trouts, the salmon ascending rivers for the purpose of spawning, leaping up cascades of considerable elevation, and finding their way to brooks and small lakes of lofty mountains, after which they return to the sea, followed by the young fish; the Herring tribe, including the Herring, the Pilchard, caught on the Cornwall coast, the Sardine, on the west coast of France and in the Mediterranean, the Anchovy of the same sea, and the Sprat, Whitebait, and Shad; the Cod tribe, to which belong the Cod, Haddock, Whiting, Ling, and Pollack, the oil obtained from their livers being very useful in the arts and in medicine; the Flat-fish or Flounder tribe; and Spiny-finned fishes, including the Perch, Gurnard, the Flying-fish, which can rise several feet into the air, and suspend itself above the surface for a few seconds; the Mackerel; the Sword-fish, which has been known to drive its long beak into the timbers of a ship; and numerous other fishes.—The next two orders consist respectively of the Lampreys and the Lancelet; the latter a little fish about an inch in length, found burrowing in the sand on the shores of the Mediterranean.

## THE BATTLE OF HASTINGS.

**ambass'adors**, messengers sent by one sovereign to another.
**ascertain'**, find out.
**carou'sing**, drinking and making merry.
**Hardra'da.**
**Northum'berland.**
**Norwe'gian.**
**reconcilia'tion**, renewal of friendship.
**rood**, cross.
**victo'rious.**

Harold was crowned king of England on the very day of the maudlin Confessor's funeral. He had good need to be quick about it. When the news reached Norman William, hunting in his park at Rouen, he dropped his bow, returned to his palace, called his nobles to council, and presently sent ambassadors to Harold, calling on him to keep his oath, and resign the crown. Harold would do no such thing. The barons of France leagued together round Duke William for the invasion of England. Duke William promised freely to distribute

English wealth and English lands among them. The pope sent to Normandy a consecrated banner, and a ring containing a hair which he warranted to have grown on the head of St Peter. He blessed the enterprise, and cursed Harold, and requested that the Normans would pay 'Peter's pence'—or a tax to himself of a penny a year on every house—a little more regularly in future, if they could make it convenient.

King Harold had a rebel brother in Flanders, who was a vassal of Harold Hardrada, king of Norway. This brother and this Norwegian king, joining their forces against England, with Duke William's help won a fight, in which the English were commanded by two nobles, and then besieged York. Harold, who was waiting for the Normans on the coast at Hastings, with his army, marched to Stamford bridge, upon the river Derwent, to give them (his brother and the Norwegians) instant battle.

He found them drawn up in a hollow circle, marked out by their shining spears. Riding round this circle at a distance, to survey it, he saw a brave figure on horseback, in a blue mantle and a bright helmet, whose horse suddenly stumbled and threw him.

'Who is that man who has fallen?' Harold asked of one of his captains.

'The king of Norway,' he replied.

'He is a tall and stately king,' said Harold, 'but his end is near.'

He added in a little while: 'Go yonder to my brother, and tell him if he withdraw his troops he shall be Earl of Northumberland, and rich and powerful in England.'

The captain rode away and gave the message.

'What will he give to my friend the king of Norway?' asked the brother.

'Seven feet of earth for a grave,' replied the captain.

'No more?' returned the brother with a smile.

'The king of Norway being a tall man, perhaps a little more,' replied the captain.

'Ride back,' said the brother, 'and tell King Harold to make ready for the fight!'

He did so very soon. And such a fight King Harold led against that force, that his brother, the Norwegian king, and every chief of note in all their host, except the Norwegian king's son, Olave, to whom he gave honourable dismissal, were left dead upon the field. The victorious army marched to York. As King Harold sat there at the feast, in the midst of all his company, a stir was heard at the doors, and messengers, all covered with mire from riding far and fast through broken ground, came hurrying in to report that the Normans had landed in England.

The intelligence was true. They had been tossed about by contrary winds, and some of their ships had been wrecked. A part of their own shore, to which they had been driven back, was strewn with Norman bodies. But they had once more made sail, led by the duke's own galley, a present from his wife, upon the prow whereof the figure of a golden boy stood pointing towards England. By day, the banner of the three Lions of Normandy, the diverse coloured sails, the gilded vanes, the many decorations of this gorgeous ship, had glittered in the sun and sunny water; by night, a light had sparkled like a star at her mast-head: and now, encamped near Hastings, with their leader lying in the old Roman castle of Pevensey, the English retiring in all directions, the

land for miles around scorched and smoking, fired and pillaged, was the whole Norman power, hopeful and strong, on English ground.

Harold broke up the feast, and hurried to London. Within a week, his army was ready. He sent out spies to ascertain the Norman strength. William took them, caused them to be led through his whole camp, and then dismissed. 'The Normans,' said these spies to Harold, 'are not bearded on the upper lip as we English are, but are shorn. They are priests.' 'My men,' replied Harold, with a laugh, 'will find those priests good soldiers.'

'The Saxons,' reported Duke William's outposts of Norman soldiers, who were instructed to retire as King Harold's army advanced, 'rush on us through their pillaged country with the fury of madmen.'

'Let them come, and come soon!' said Duke William.

Some proposals for a reconciliation were made, but were soon abandoned. In the middle of the month of October, in the year one thousand and sixty-six, the Normans and the English came front to front. All night the armies lay encamped before each other, in a part of the country then called Senlac, now called (in remembrance of them) Battle. With the first dawn of day they arose. There, in the faint light, were the English on a hill; a wood behind them; in their midst the royal banner, representing a fighting warrior woven in gold thread, adorned with precious stones; beneath the banner, as it rustled in the wind, stood King Harold on foot, with two of his remaining brothers by his side; around them, still and silent as the dead, clustered the whole English army—every soldier covered by his shield, and bearing in his hand his dreaded English battle-axe.

On an opposite hill, in three lines—archers, foot-

soldiers, horsemen—was the Norman force. Of a sudden, a great battle-cry, 'God help us!' burst from the Norman lines. The English answered with their own battle-cry, 'God's Rood! Holy Rood!' The Normans then came sweeping down the hill to attack the English.

There was one tall Norman knight who rode before the Norman army on a prancing horse, throwing up his heavy sword and catching it, and singing of the bravery of his countrymen. An English knight who rode out from the English force to meet him, fell by this knight's hand. Another English knight rode out, and he fell too. But then a third rode out, and killed the Norman. This was in the first beginning of the fight. It soon raged everywhere.

The English, keeping side by side in a great mass, cared no more for the showers of Norman arrows than if they had been showers of Norman rain. When the Norman horsemen rode against them, with their battle-axes they cut men and horses down. The Normans gave way. The English pressed forward. A cry went forth among the Norman troops that Duke William was killed. Duke William took off his helmet, in order that his face might be distinctly seen, and rode along the line before his men. This gave them courage. As they turned again to face the English, some of their Norman horse divided the pursuing body of the English from the rest, and thus all that foremost portion of the English army fell, fighting bravely. The main body still remaining firm, heedless of the Norman arrows, and with their battle-axes cutting down the crowds of horsemen when they rode up, like forests of young trees, Duke William pretended to retreat. The eager English followed. The Norman army closed again, and fell upon them with great slaughter.

'Still,' said Duke William, 'there are thousands of the English, firm as rocks around their king. Shoot upward, Norman archers, that your arrows may fall down upon their faces.'

The sun rose high, and sank, and the battle still raged. Through all the wild October day, the clash and din resounded in the air. In the red sunset, and in the white moonlight, heaps upon heaps of dead men lay strewn, a dreadful spectacle, all over the ground. King Harold, wounded with an arrow in the eye, was nearly blind. His brothers were already killed. Twenty Norman knights, whose battered armour had flashed fiery and golden in the sunshine all day long, and now looked silvery in the moonlight, dashed forward to seize the royal banner from the English knights and soldiers, still faithfully collected round their blinded king. The king received a mortal wound, and dropped. The English broke and fled. The Normans rallied, and the day was lost.

Oh, what a sight beneath the moon and stars, when lights were shining in the tent of the victorious Duke William, which was pitched near the spot where Harold fell—and he and his knights were carousing within—and soldiers with torches, going slowly to and fro without, sought for the corpse of Harold among piles of dead—and the Warrior, worked in golden thread and precious stones, lay low, all torn and soiled with blood—and the three Norman Lions kept watch over the field!

## YE MARINERS OF ENGLAND.

1.

Ye mariners of England!
That guard our native seas;
Whose flag has braved, a thousand years,
The battle and the breeze!
Your glorious standard launch again
To match another foe!
And sweep through the deep,
While the stormy winds do blow;
While the battle rages loud and long,
And the stormy tempests blow.

2.

The spirits of your fathers
  Shall start from every wave!—
For the deck it was their field of fame,
  And Ocean was their grave:
Where Blake and mighty Nelson fell,
Your manly hearts shall glow,
As ye sweep through the deep,
While the stormy tempests blow;
While the battle rages loud and long,
And the stormy winds do blow.

3.

Britannia needs no bulwark,
  No towers along the steep:
Her march is o'er the mountain-waves,
  Her home is on the deep.
With thunders from her native oak,
She quells the floods below—
As they roar on the shore,
When the stormy tempests blow:
When the battle rages loud and long,
And the stormy winds do blow.

4.

The meteor flag of England
  Shall yet terrific burn;
Till danger's troubled night depart,
  And the star of peace return.
Then, then, ye ocean-warriors!
Our song and feast shall flow
To the fame of your name,
When the storm has ceased to blow;
When the fiery fight is heard no more,
And the storm has ceased to blow.

## THE LYING SERVANT (1).

addict'ed, given up.
affic'tion, distress.
compan'ionable, agreeable.
coun'tenance, face.
depict'ed, shewn as if painted.
knave, an old word for servant.
protesta'tions, declarations.
rey'nard, the name given to the fox in fables and in poetry.
tradi'tion, story handed down.

There lived in Swabia a certain lord, pious, just, and wise, to whose lot it fell to have a serving-man, a great rogue, and above all, much addicted to the vice of lying.

The knave was given to boast of his wondrous travels. He had visited countries which are nowhere to be found on the map, and seen things which mortal eyes never beheld. He would lie through the twenty-four hours of the clock—for he dreamed falsehoods in his sleep, to the truth of which he swore when he was awake.

When any one said, 'How can that be?' he would answer, with fierce protestations, that so it was. Yet was the knave useful in the household, quick and handy; therefore he was not disliked by his lord, though verily he was a great liar.

It chanced, one pleasant day in spring, after the rains had fallen heavily, and greatly swollen the floods, that the lord and the knave rode out together, and their way passed through a shady and silent forest. Suddenly appeared an old and well-grown fox. 'Look!' exclaimed the master of the knave; 'look! what a huge beast! Never before have I seen a reynard so large!'

'Doth this beast surprise thee by its hugeness?' replieth straight the serving-groom, casting his eye slightingly on the animal, as it fled for fear away into

the cover of the brakes. 'I have been in a kingdom where the foxes are as big as are the oxen in this.'

Whereupon, hearing so vast a lie, the lord answered, calmly, but with mockery in his heart: 'In that kingdom there must be excellent lining for the cloaks, if furriers can there be found to dress skins so large.'

And so they rode on; the lord in silence, but soon he began to sigh heavily. Still he seemed to wax more and more sad in spirit, and his sighs grew deeper and more quick. Then inquired the knave of the lord what sudden affliction, or cause of sorrow, had happened. 'Alas!' replied the wily master, 'I trust in Heaven's goodness that neither of us two hath to-day chanced to say the thing which is not; for assuredly, if the tradition of the country-people hereabout is true, he that hath so done must this day perish.'

The knave, on hearing these doleful words, and fancying real sorrow to be depicted on his master's countenance, instantly felt as if his ears grew more wide, that not a word or syllable of so strange a discovery might escape his troubled sense. And so, with eager exclamations, he demanded of the lord to ease his suspense, and to explain why so cruel a doom was now about to fall upon companionable liars.

'Hear, then, dear knave,' answered the lord to the earnestness of his servant; 'since thou must needs know, hearken! and may no trouble come to thee from what I shall say. To-day we ride far, and in our course is a vast and heavy-rolling flood, of which the ford is narrow and the pool is deep. There is a tradition, that Heaven has given to this flood the power of sweeping down into its dark holes all dealers in falsehood who may rashly venture to put themselves within its truth-loving current.

But to him who hath told no lie there is no fear of this river. Spur we our horses, knave; for to-day our journey must be long.'

Then the knave thought: 'Long, indeed, must the journey be for some who are now here!' And, as he spurred, he sighed heavier and deeper than his master had done before him, who now went gaily on; nor ceased he to cry: 'Spur we our horses, knave; for to-day our journey must be long.'

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## THE LYING SERVANT (2).

**approach'eth**, draws near.
**discon'solate**, very sad.
**pen'itence**, repentance.
**sincer'ity**, truth.
**superstiti'ous**, believing in what is absurd.
**var'let**, an old name for an attendant.

Then came they to a brook. Its waters were small, and its channel such as a boy might leap across. Yet, nevertheless, the knave began to tremble, and falteringly he asked: 'Is this now the river where harmless liars must perish?'

'This! ah, no,' replied the lord; 'this is but a brook; no liar need tremble here.'

Yet was the knave not wholly assured; and, stammering, he said: 'My gracious lord, thy servant now bethinks him that he to-day hath made a fox too huge; that of which he spake was verily not so large as is an ox; but, upon my honour, he was as big as is a good-sized *roe!*'

The lord replied, with wonder in his tone: 'What of this fox concerneth me? If large or small, I care not.

Spur we our horses, knave; for to-day our journey must be long.'

'Long, indeed!' still thought the serving-groom; and in sadness he crossed the brook. Then they came to a stream running quickly through a green meadow, the stones shewing themselves in many places above its frothy water. The varlet started, and cried aloud: 'Another river! surely of rivers there is to-day no end! Was it of this thou talkedst heretofore?'

'No,' replied the lord, 'not of this;' and more he said not, yet marked he, with inward gladness, his servant's fear.

'Because, in good truth,' rejoined the knave, 'it is on my conscience to give thee note that the fox of which I spake was not larger than a *calf!*'

'Large or small, let me not be troubled with thy fox. The beast concerneth not me at all.'

As they quitted the woody country, they perceived a river in the way, which gave sign of having been swollen by the rains; and on it was a boat. 'This, then, is the doom of liars,' said the knave; and he looked earnestly toward the ferry-boat. 'Be informed, my good lord,' he said, 'that that reynard was not larger than a fat *sheep!*'

The lord seemed angry, and answered: 'This is not yet the grave of falsehood. Why torment me about this fox? Rather spur we our horses; for we have far to go.'

'Oh, mercy upon me!' said the knave to himself; 'the end of my journey approacheth!'

Now the day declined, and the shadows of the travellers lengthened on the ground; but darker than the twilight was the sadness on the face of the knave. And, as the wind rustled the trees, he ever and anon turned pale, and

inquired of his master if the noise were of a torrent or stream of water.

Still, as the evening fell, his eyes strove to discover the course of a winding river. But nothing of the sort could he discern, so that his spirits began to revive, and he was fain to join in discourse with the lord. But the lord held his peace, and looked as one who expects an evil thing.

Suddenly the way became steep, and they descended in a low and woody valley, in which was a broad and black river, creeping fearfully along, without bridge or bark to be seen near. 'Alas! alas!' cried the knave, 'this, then, is the river in which liars must perish!'

'Even so,' said the lord; 'this is the stream of which I spake; but the ford is sound and good for true men. Spur we our horses, knave; for night approacheth, and we have yet far to go.'

'My life is dear to me,' said the trembling serving-man; 'and thou knowest that, were it lost, my wife would be disconsolate. In sincerity, then, I declare that the fox which I saw in the distant country was not larger *than he who fled from us in the wood this morning!*'

Then laughed the lord aloud, and said: 'Ho, knave, wast thou afraid of thy life—and will nothing cure thy lying? Is not falsehood, which kills the soul, worse than death, which has mastery only over the body? This river is no more than any other; nor hath it a power such as the tradition of the superstitious country-people hereabout has given to it.

'The ford is safe, and the waters gentle as those we have already passed. But who shall pass thee over the shame of this day? In it thou must needs sink, unless penitence come to help thee over, and cause thee to look

back on the gulf of thy lies, as on a danger from which thou hast been delivered by Heaven's grace.'

And, as he railed against his servant, the lord rode on into the water, and both in safety reached the opposite shore. Then vowed the knave that, from that time forward, he would duly measure his words; and glad was he so to escape. Such is the story of the lying servant and the merry lord; by which let the reader profit.

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## HOWARD THE PHILANTHROPIST.

**acquitt'ed**, set free.
**alle'viating**, making lighter.
**benev'olent**, kind, charitable.
**circum'ference**, measure round about.
**Constantino'ple.**
**delib'erately**, with fixed purpose.
**diffu'sing**, spreading.
**dimin'ished**, grew less.
**distrib'uted**, gave away here and there.
**gratu'itously**, without having to pay.
**human'ity**, kindness.
**lazaret'to.**
**observa'tions**, remarks on what he had seen.
**philan'thropist**, one who loves and does all he can to serve mankind.
**privateer'**, an armed private vessel sent out to plunder ships.
**quar'antine**, forty days, the time during which a ship supposed to be infected with the plague, &c. is kept from intercourse with the shore.
**sugges'tions**, hints, proposals.
**super'fluous**, more than required.
**Zan'te.**

John Howard, an English gentleman of fortune, is famous for the exertions he made to lessen human suffering. On a voyage to Lisbon when a young man, he was taken by the French, and thrown into a wretched dungeon at Brest, where he and his companions had to lie for several nights on a stone floor, and were nearly starved. The hardships which he suffered, and saw others suffering, on this occasion, made a great impression on his mind, and when

he returned to his country, he exerted himself so much with the British government, that a complaint was made, and the French were induced to treat English prisoners with more humanity.

For some years afterwards, he lived at his estate at Cardington, near Bedford, diffusing happiness all around him. He settled a number of worthy and industrious persons in little cottages on his ground, and watched over their comfort with the greatest care. He built schools, where children were taught to read gratuitously; and he distributed a large portion of his income in charity, living, for his own part, on a very moderate sum. At length, about the year 1773, his attention was called to the state of the jails in his native county. He found them to be, as jails then were everywhere, dens of misery, where health was lost, and vice rather increased than diminished. By great exertions he was able to effect some improvement in the prisons near his own residence. Then he was led to inquire into the condition of more distant jails. In time he visited every large prison in England, and many of those in Scotland and Ireland. Being able to describe their condition to persons in authority, he proved the means of causing two acts of parliament to be passed—one for lessening the fees to such prisoners as were acquitted, and the other for preserving the health of prisoners. Having thus done some good in his own country, he resolved to carry his benevolent exertions abroad. In 1775, he commenced a series of tours on the continent, which were only concluded by his death sixteen years afterwards. He visited the prisons of every country in Europe, ascertaining their condition, and exerting himself with the various governments to get them improved. Everywhere he lived

frugally, and devoted his superfluous fortune to the relief of the miserable. From time to time, in the course of his travels, he published his observations, with suggestions for a better system of prison-discipline; and by these means, as well as by the interest felt in his own singular benevolence, he so effectually fixed public attention on the subject, that much improvement was the consequence. In 1784, he found that he had travelled no less than forty-two thousand miles, or nearly as much as twice the circumference of the globe, for the purpose of alleviating the hardships suffered in prisons.

Howard had heard much of the miseries which the plague produces at all the ports along the Mediterranean. At each of these there is a kind of hospital called *lazaretto*, where the whole of the individuals landing from a vessel which comes from an infected place are kept confined for a considerable time, to make sure that they are quite free from the disease. Of these lazarettos, which are as horrible as the worst prisons, and probably occasion more sickness and mortality than they prevent, Mr Howard resolved to make a personal examination. He set out in 1785, without a servant, for he did not think himself at liberty to expose any life but his own. He took his way by the south of France, through Italy, to Malta, Zante, Smyrna, and Constantinople. From the latter city he returned to Smyrna, where he knew the plague then prevailed, for the purpose of going to Venice with a foul bill of health, that he might be subjected to the rigour of a quarantine in the lazaretto, and thus have a personal experience of its rules. In the course of the voyage from Smyrna, the vessel was attacked by a Moorish privateer, and in the action which took place, and by which the barbarians were repelled, Mr

Howard fought with great bravery. At Venice he went with the greatest cheerfulness into the lazaretto, and there remained, as usual, for forty days, thus deliberately exposing his life for the sake of his fellow-creatures. Such conduct could not fail to procure for him universal esteem. The emperor of Germany so much admired his heroic benevolence, that when Mr Howard returned through Vienna, he requested an interview with him, and commenced a subscription in order to erect a statue of him in a public part of the city. The design to honour Mr Howard in this way was afterwards abandoned, at the express request of the philanthropist, who was as modest as he was good.

In the summer of 1789, Mr Howard set out upon his last tour. He went through Germany to St Petersburg and Moscow. The prisons and hospitals were everywhere thrown open to him, as to one who had acquired a censorship over those abodes of the unfortunate in every part of the civilised world. He then travelled to the new Russian settlements on the Black Sea, and established himself at Cherson, where a malignant fever prevailed. A young lady, who had caught the infection, desired a visit from Howard, who, she thought, might be able to cure her. Ever alive to the call of the distressed, he went to administer to her relief. He caught the infection, probably from her, and became one of its victims. He was buried in the neighbourhood of Cherson, where, some years after, the Emperor Alexander caused a monument to be erected to his memory.

## THE WOLF AND THE SHEPHERD'S DOG.

**achieve'ments**, deeds, things performed.
**appear'ance.**
**assass'in**, one who kills secretly.
**despatch'**, kill.
**destruc'tion.**
**execu'tion**, being put to death.
**expert'**, skilful.
**hero'ically**, like a hero.
**in'nocent**, not intending to do harm.
**protest'ed**, kept saying.
**reputa'tion**, character.
**tempta'tion.**

A wolf ranging over the forest, came within the borders of a sheep-walk; when, meeting with a shepherd's dog, that, with a surly sort of a growl, demanded his business there, he thought proper to put on as innocent an appearance as he could, and protested upon his honour that he meant not the least offence. 'I am afraid,' said the dog, 'the pledge of your honour is but a poor deposit for your honesty. You must not take it amiss if I object to the security.'

'No slur upon my reputation,' replied the wolf, 'I beg of you. My sense of honour is as delicate as my great achievements are renowned. I would not leave a stain upon my memory for the world.'

'The fame of what are commonly called great achievements is very precious, to be sure,' returned the dog—'almost equal to the character of an excellent butcher, a gallant highwayman, or an expert assassin.'

While the dog was yet speaking, a lamb happened to stray within reach of our hero. The temptation was stronger than he was able to resist; he sprung upon his prey, and was scouring hastily away with it. However, the dog seized and held him till the arrival of the shepherd, who took measures for his execution. Just as he

was going to despatch him, 'I observe,' says the dog, that one of your noble achievements is the destruction of the innocent. You are welcome to the renown, as you are also to the reward of it. As for me, I shall prefer the credit of having honestly defended my master's property to any fame you have acquired by thus heroically invading it.'

---

## SIR PHILIP SIDNEY.

**accom'plished**, complete in acquirements.
**admira'tion.**
**appre'ciated**, justly valued.
**neces'sity**, need.
**wist'ful**, earnestly wishing.

Sir Philip Sidney was a gallant soldier, a poet, and the most accomplished gentleman of his time. At the battle of Zutphen, in the Netherlands, after having two horses killed under him, he received a wound while in the act of mounting a third, and was carried bleeding and faint to the camp. Men wounded in battle usually suffer from extreme thirst; but water at such a time is not easily found. A small quantity was brought to allay the thirst of Sir Philip; but, as he was raising it to his lips, he observed that a poor wounded soldier, who was carried past at the moment, looked at the cup with wistful eyes. The generous Sidney instantly withdrew it untasted from his mouth, and gave it to the soldier, saying: 'Thy necessity is yet greater than mine.'

He died of his wound, aged only thirty-three; but his kindness to the poor soldier has caused his name to be remembered ever since with admiration, and it will probably never be forgotten while generous actions are appreciated by mankind.

## THE SEA-FIGHT

1.

The Sun hath ridden into the sky,
And the Night gone to her lair;
Yet all is asleep
On the mighty Deep,
And all in the calm gray air.

2.

All seemeth as calm as an infant's dream,
As far as the eye may ken:
But the cannon blast,
That just now passed,
Hath awakened ten thousand men.

3.

An order is blown from ship to ship:
All round and round it rings;
And each sailor is stirred
By the warlike word,
And his jacket he downwards flings.

4.

He strippeth his arms to his shoulders strong;
He girdeth his loins about;
And he answers the cry
Of his foemen nigh,
With a cheer and a noble shout.

5.

What follows?—a puff, and a flash of light,
And the booming of a gun;
And a scream, that shoots
To the heart's red roots,
And we know that a fight 's begun.

6.

A thousand shot are at once let loose:
Each flies from its brazen den,
Like the Plague's swift breath,
On its deed of death,
And smites down a file of men.

7.

The guns in their thick-tongued thunder speak,
And the frigates all rock and ride,
And timbers crash,
And the mad waves dash,
Foaming all far and wide:

8.

And high as the skies run piercing cries,
All telling one tale of woe—
That the struggle still,
Between good and ill,
Goes on, in the earth below.

9.

Day pauses, in gloom, on his western road:
The Moon returns again:
But, of all who looked bright,
In the morning light,
There are only a thousand men.

10.

Look up at the brooding clouds on high!
Look up at the awful sun!
And, behold—the sea flood
Is all red with blood:
Hush!—a battle is lost—and won!

## THE SIEGE OF CALAIS.

calam'ities.
capit'ulate, to yield on conditions.
consterna'tion, astonishment and terror.
consum'mate, raised to the highest point.
emu'lous, desirous to do the same.
expe'dient, a means.
humilia'tion, state of being humble or meek.
impreg'nable, so strong as not to be taken.
imputa'tion, charge.
inde'lible, that cannot be blotted out.
indispens'ably.
ineffec'tual.
magnanim'ity, greatness of soul.
obla'tion, sacrifice, offering.
plebe'ians, common people.

Edward III. after the battle of Cressy laid siege to Calais. He had fortified his camp in so impregnable a manner that all the efforts of France proved ineffectual to raise the siege, or throw succours into the city. The citizens, under Count Vienne, their gallant governor, made an admirable defence. France had now put the sickle into her second harvest since Edward, with his victorious army, sat down before the town. The eyes of all Europe were intent on the issue.

At length famine did more for Edward than arms. After suffering unheard-of calamities, the citizens resolved to attempt the enemy's camp. They boldly sallied forth; the English joined battle; and after a long and desperate engagement, Count Vienne was taken prisoner, and the citizens who survived the slaughter retired within their gates. The command devolving upon Eustace St Pierre, a man of mean birth, but of exalted virtue, he offered to capitulate with Edward, provided he permitted them to depart with life and liberty.

Edward, to avoid the imputation of cruelty, consented

to spare the bulk of the plebeians, provided they delivered up to him six of their principal citizens with halters about their necks, as victims of due atonement for that spirit of rebellion with which they had inflamed the vulgar. When his messenger, Sir Walter Mauny, delivered the terms, consternation and pale dismay were impressed on every countenance. To a long and dead silence, deep sighs and groans succeeded; till Eustace St Pierre, getting up to a little eminence, thus addressed the assembly:

'My friends, we are brought to great straits this day. We must either yield to the terms of our cruel and ensnaring conqueror, or give up our tender infants, our wives and daughters, to the brutal soldiers. Is there any expedient left whereby we may avoid, on the one hand, the guilt and infamy of delivering up those who have suffered every misery with you; or, on the other hand, the desolation and horror of a sacked city?

'There *is*, my friends—there *is* one expedient left! A gracious, an excellent, a godlike expedient! Is there any one here to whom virtue is dearer than life? Let him offer himself an oblation for the safety of his people!'

He spoke. But a universal silence prevailed. Each man looked around for the example of that virtue and magnanimity which all wished to approve in themselves, though they wanted the resolution. At length St Pierre resumed: 'I doubt not but there are many here as ready, nay, more zealous for this martyrdom, than I can be; though the station to which I am raised by the captivity of Count Vienne imparts a right to be the first in giving my life for your sakes. I give it freely! I give it cheerfully!—Who comes next?'

'Your son!' exclaimed a youth not yet come to maturity.

'Ah! my child!' cried St Pierre; 'I am then twice sacrificed.—But no:—I have rather begotten thee a second time. Thy years are few, but full, my son. The victim of virtue has reached the utmost purpose and goal of mortality.—Who next, my friends? This is the hour of heroes!'

'Your kinsman!' cried John d'Aire.

'Your kinsman!' cried James Wissant.

'Your kinsman!' cried Peter Wissant.

'Ah!' exclaimed Sir Walter Mauny, bursting into tears, 'why was not *I* a citizen of Calais!'

The sixth victim was still wanting, but was quickly supplied by lot from numbers who were now emulous of so ennobling an example. The keys of the city were then delivered to Sir Walter. He took the six prisoners into his custody; then ordered the gates to be opened, and gave charge to his attendants to conduct the remaining citizens, with their families, through the camp of the English.

Before they departed, however, they desired permission to take their last adieu of their deliverers. What a parting! What a scene! They crowded, with their wives and children, about St Pierre and his fellow-prisoners. They embraced, they clung around, they fell prostrate before them. They groaned, they wept aloud, and the joint clamour of their mourning passed the gates of the city, and was heard throughout the English camp.

The English by this time were apprised of what passed within Calais. They heard the voice of lamentation, and their souls were touched with compassion. Each of the soldiers prepared a portion of his own victuals to welcome

and entertain the half-famished inhabitants; loading them with as much as their present weakness was able to bear, in order to supply them with sustenance by the way.

At length St Pierre and his fellow-victims appeared, under the conduct of Sir Walter and a guard. All the tents of the English were instantly emptied. The soldiers poured from all parts, and arranged themselves on each side, to behold, to contemplate, to admire, this little band of patriots, as they passed. They bowed down to them on all sides. They murmured their applause of that virtue which they could not but revere, even in enemies; and they regarded those ropes which the devoted men had voluntarily assumed about their necks, as ensigns of greater dignity than that of the British garter.

As soon as they had reached the presence—'Mauny,' says the monarch, 'are these the principal inhabitants of Calais?'

'They are,' says Mauny. 'They are not only the principal men of Calais—they are the principal men of France, my lord, if virtue has any share in the act of ennobling.'

'Were they delivered peaceably?' asks Edward. 'Was there no resistance, no commotion, among the people?'

'Not in the least, my lord. The people would all have perished rather than have delivered the least of these to your majesty. They are self-delivered, self-devoted; and come to offer up their inestimable heads as an ample equivalent for the ransom of thousands.'

Edward was secretly piqued at this reply of Sir Walter; but he knew the privilege of a British subject, and suppressed his resentment. 'Experience,' says he, 'has ever shewn that lenity only serves to invite people to new

crimes. Severity, at times, is indispensably necessary to compel subjects to submission, by punishment and example.—Go,' he cried to an officer, 'lead these men to execution.'

At this instant a sound of triumph was heard throughout the camp. The queen had just arrived, with a powerful reinforcement of gallant troops. Sir Walter flew to receive her majesty, and briefly informed her of the particulars respecting the six victims. As soon as she had been welcomed by Edward and his court, she desired a private audience.

'My lord,' said she, 'the question I am to enter upon is not touching the lives of a few mechanics; it respects the honour of the English nation; it respects the glory of my Edward, my husband, my king. You think you have sentenced six of your enemies to death. No, my lord, they have sentenced themselves; and their execution would be the execution of their own orders, not the orders of Edward. The stage on which they would suffer would be to *them* a stage of *honour;* but a stage of *shame* to Edward; a reproach on his conquests; an indelible disgrace to his name.

'Let us rather disappoint these haughty burghers, who wish to invest themselves with glory at our expense. We cannot wholly deprive them of the merit of a sacrifice so nobly intended, but we may cut them short of their desires. In the place of that death by which their glory would be consummate, let us bury them under gifts; let us put them to confusion with applauses. We shall thereby defeat them of that popular opinion which never fails to attend those who suffer in the cause of virtue.'

'I am convinced. You have prevailed. Be it so!' replied Edward. 'Prevent the execution. Have them

instantly before us.' They came; when Queen Philippa, with an aspect and accent diffusing sweetness, thus bespoke them:

'Natives of France, and inhabitants of Calais! You have put us to a vast expense of blood and treasure in the recovery of our just and natural inheritance. But you have acted up to the best of an erroneous judgment; and we admire and honour in you that valour and virtue by which we have so long been kept out of our rightful possessions. You noble burghers! You excellent citizens! Though you were tenfold the enemies of our person and our throne, we can feel for you nothing on our part save respect and affection.

'You have been sufficiently tested. We loose your chains; we snatch you from the scaffold; and we thank you for that lesson of humiliation which you teach us, when you shew us that excellence is not of blood, of title, or of station; that virtue gives a dignity superior to that of kings; and that those whom the Almighty informs with sentiments like yours are justly and eminently raised above all human distinctions.

'You are now free to depart to your kinsfolk, to your countrymen, to all those whose lives and liberties you have so nobly redeemed, provided you refuse not the tokens of our esteem. Yet we would rather bind you to ourselves by every endearing obligation; and for this purpose we offer to you your choice of the gifts and honours that Edward has to bestow. Rivals for fame, but always friends to virtue, we wish that England were entitled to call you her sons.'

# LESSONS ON HEALTH (1).

## On Air.

at'mosphere.
carbon'ic, formed from carbon or charcoal.
depriva'tion, state of being deprived of, loss.
infirm'ities, weaknesses, diseases.
ingre'dients, parts which mixed together form a whole.
innum'erable, that cannot be numbered.
Ja'va, a Dutch island in the Indian Ocean.
ni'trogen, the gas that produces nitre.
ox'ygen, the gas that produces acids.
transpa'rent, that can be seen through.
undilut'ed, not having its strength weakened by mixture.

The three principal things, without which no one can enjoy really good health, are Good Food, Good Air, and Good Water.

A very large number of the ailments and infirmities from which people suffer are to be traced to some deprivation of one or other of these three great necessaries to which they have at some time been exposed. Food, air, and water, people must have, if they are to live at all; and if they have bad food, or bad air, or bad water, disease of some kind or other is the certain consequence.

Just as the bottom of the sea is covered by water, so the whole of the surface of the earth is covered, to the depth of many miles, by a thin, transparent, invisible substance, called *air*. This great ocean of air, at the bottom of which we live and move, is called the atmosphere, because that word means a sphere, or globe, of *vapour*.

The air is composed of four different kinds of vapour, called gases. The first kind that we will mention is called *oxygen*. This gas is so necessary to animal life that neither men nor beasts could live a single hour without a constant and regular supply of it; but, at the same time, it is of so strong and exciting a nature, that if the atmosphere contained nothing else, their lives would be but short, for they would be worked into a fever, and worn out and exhausted before their time. In the same manner, the flame of a candle could not burn unless there was oxygen in the air; but if you could see a lighted candle put into a vessel containing nothing but oxygen, you would see it begin indeed to burn with exceeding brightness, but so fast that there would soon be no candle left. It seems, then, that although neither men nor beasts can live without oxygen, yet pure and undiluted oxygen would be so much too strong for them that instead of doing them good, it would destroy them, The oxygen in the air must, therefore, be mixed with something else to make it weaker, and fit it for breathing; and so we find there is another gas, called *nitrogen*, whose chief use seems to be to serve this very purpose. It is not a poisonous gas, but it has not, like oxygen, the power of feeding animal life, and it is therefore most suitable for diluting the too active oxygen, and bringing it down to the proper degree of strength. So much diluting does it require, that there is four times as much nitrogen as there is oxygen in the air we breathe.

The bulk of the atmosphere is made up of these two gases, oxygen and nitrogen; but there are also two other ingredients, which, though present in much smaller quantities, are equally needful to the well-being of the earth and its inhabitants. Animal life depends upon

vegetable life. Now plants cannot live without air any more than animals can, but the kind of nourishment that they require is quite different, and the oxygen that keeps up life in animals would not suit them at all. The name of the gas that plants require is *carbonic acid gas.* It is a kind of gas which is highly destructive to animal life. Animals, as has been already said, could not live in nitrogen gas, because that gas does not contain any food for them; but if there were as much carbonic acid gas in the air as there is of nitrogen, it would speedily kill every animal, because not only does it contain no food fit for animals, but it is actually poisonous to them.

There is a valley in Java which is called the Poison Valley, because the bottom of it is filled with carbonic acid gas. It is strewn with the skeletons of human beings, tigers, deer, and other animals, and of numbers of birds; all of whom must have met their deaths by wandering accidentally into the fatal place, where they were immediately destroyed by breathing the poisonous air that it contains. And yet this gas, which is such a terrible enemy to animals, is absolutely needful to the life of plants! There must, therefore, be some of it in the atmosphere, and so we find there is, but the quantity is a small one, because, if there were more, it would do harm to man and to the animals. All the innumerable leaves that trees and plants put forth into the air are covered with tiny invisible air-holes or pores, by which, all day long, they drink in this gas, which is their natural food.

Lastly, besides oxygen and nitrogen, and a small quantity of carbonic acid gas, the atmosphere always contains a certain quantity of *watery vapour.* You have often seen watery vapour on its way to mingle with the

air. When it issues from the spout of the tea-kettle you call it steam, and when it rises up from the wet ground you call it mist. Its office is to keep the air moist, for if the atmosphere were perfectly dry, neither plants nor animals could live in it comfortably; but a very small proportion of watery vapour is enough to moisten the air to the proper degree, much less than the steaming earth sends continually upwards. What, then, becomes of the remainder? It collects in clouds, and comes down again in the shape of rain and dew, whereby the earth is refreshed and watered, and without which it could not become fruitful.

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## LESSONS ON HEALTH (2).

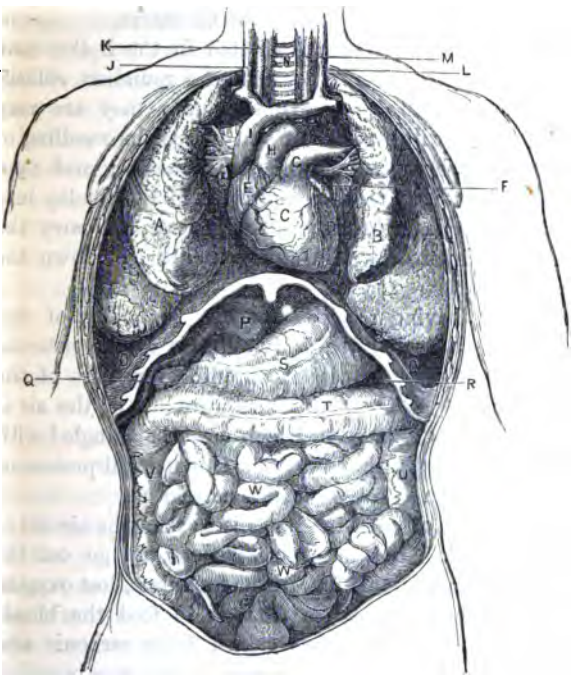
### On Breathing—The Lungs.

**activ'ity.**
**imme'diately.**
**ob'long**, anything longer than it is broad.
**respira'tion**, the act of breathing.
**sed'entary**, that requires sitting.
**thor'oughly.**
**unwhole'some**, not wholesome or good for the health.
**vig'orous**, sound, strong.

Breathing is a twofold work. The *first* thing you do when you breathe is to draw air into your body, and the *second* thing is to send forth air out of your body. The chief way in which this act of breathing, or *respiration*, is performed, is by means of the lungs. Their office is, therefore, a very important one.

*First*, they have to draw in the air. This they do somewhat after the manner in which a pair of bellows can be made to suck in air. The air is drawn in at the

mouth and nostrils, and finds its way down the throat by the pipe that is called the windpipe. Wind is air in motion, you know; and it is by this pipe that the outer air is drawn down into the lungs.




Contents of the Chest and Abdomen.

Diaphragm, O; Heart, C; Lungs, A, B; Windpipe, N; Liver, P; Spleen, R; Stomach, S; Small Intestine, W, W; Large Intestine, T, U, V.

At the bottom of the throat the windpipe branches off into two large tubes. One leads into the left lung, and

the other into the right lung; and these tubes branch off again into smaller tubes, and the smaller tubes into smaller tubes still, until they become at last as fine as hairs. Thus a fine network of tubes and channels of various sizes is carried into every part of the lungs, and these are the passages by which the air enters.

The lungs themselves are situated in the hollow part of the chest. In shape they are of a roundish oblong, and somewhat flattened. In substance they are very elastic, as you will perceive if you notice the swelling of your chest when you draw a long breath; and they consist of an innumerable multitude of little cells, into which the delicate passages already described carry the air that has been drawn in at the mouth and down the windpipe.

*Secondly*, having received the air, the office of the lungs is to take what the body requires for its nourishment out of it, and to pass it on into every part of the human frame. What the body requires out of the air is a regular supply of oxygen, which must be mingled with the blood. It is in the lungs that this needful process of receiving oxygen into the blood is carried on.

*Thirdly*, the office of the lungs is to send the air out of the body again. But, of course, it does not go out the same as it came in. It has, in the first place, lost oxygen, for oxygen has been taken from it to feed the blood; and, in the next place, it has gained more carbonic acid gas, and more watery vapour. This is one way in which the supply of carbonic acid gas, which the plants require, is kept up. The used-up air, which has been breathed into the body, is breathed forth again a good deal poorer in oxygen, but a good deal richer in carbonic acid gas.

You have already been told that carbonic acid gas is

good for plants, but bad for animals; it would, therefore, be very unwholesome to have an extra quantity of it floating in the atmosphere, just at the level of our mouths and noses. What we want is a constant supply of *fresh* air to breathe in, and we could not have this unless some arrangement existed for carrying away the used-up air when it issues from the mouth again. Well, there is just such an arrangement. If you will breathe for a moment upon your hand you will feel that the air which you send forth from the lungs is a little warm; and it is the nature of air to rise upwards when it has been heated. What happens, then, to the air that issues out of the lungs? It rises upwards immediately, and as it goes up it displaces some of the cooler air above it, which comes downwards in its stead. We do not see these movements taking place in the invisible air; they are so gentle that we do not even feel them; yet it is by such means as these that the air we breathe is kept fresh and wholesome, and fit for us to live in.

We cannot enjoy really vigorous health unless our lungs are in thoroughly good condition. Their work is so important to the health of the whole body, that if anything is wrong with them, we feel it in every part of our frame; it is necessary, therefore, that we should take proper care of our lungs. Active work, that is, work that requires us to move about, is better for the lungs than sedentary work, that is, work that requires us to sit still, and those who have sedentary work to do should try, if they value their health, to get some time every day for walking or some other kind of activity.

## LESSONS ON HEALTH (3).

### About Bad Air.

at'oms, very small particles.
crev'ice, a narrow opening.
par'ticles, very small parts or bits.
stag'nant, not pure from being motionless.
uncom'fortable.
ventila'tion, act of supplying fresh air.
ven'tilator, a contrivance for letting in fresh air.

It is the nature of warm air to rise upwards above any air that is colder than itself. Out of doors, this is quite enough. Up goes the used-up air with its burden of carbonic acid gas, and it is soon dispersed, and scattered, and carried whithersoever it may be wanted.

But, supposing we are in a room, what happens then? The used-up air rises, of course, as it must always do, and gets as high as it can—that is, as high as the ceiling; and then, if it can find any crack or crevice at which to get out, it escapes into the outer air. But if there is no crack or crevice? Why, then, by degrees, it loses the heat that it brought out of the lungs with it, and when it is cold, the carbonic acid gas, which is rather heavier than the other kinds of gas that are to be found in the air, drops downwards, and begins to spoil the air that the people in the room are breathing.

Now, a candle, or a fire, as it burns, uses up the oxygen in the air, just as we do as we breathe. And you may be sure that no human being could live in air in which a candle could not burn. Let us see, then, what will happen if we put a glass jar over a lighted candle; will it go on burning? For a little while it will, but then it will begin to burn fainter and fainter, and at last it will go out.

Why does it go out? Simply because it has used up all the oxygen in the air, and there is no way by which the used-up air can get out, and fresh air from the outside get in. It was smothered for want of fresh air. Just the same thing would happen to a human being if he were shut up in a place where he could not get fresh air. After a time, he would begin to feel an unbearable closeness and oppression, which would increase upon him more and more, and at last he would die.

Breathing in used-up air is always bad for people. Although there may be enough oxygen left to keep them alive, still, if there is more carbonic acid gas, and less oxygen than there ought to be, they will certainly feel it. Why do people so often get headaches, and feel uncomfortable in a crowded room? Because the air has become spoilt and heated by so many persons breathing in it. Why do so many people feel tired and unrefreshed when they wake up after a night spent in a crowded bedroom, with windows and door fast shut to keep out the cold? It is because of the closeness of the room.

All bed-rooms are apt to smell a little close in the morning; and the first thing we ought to do when we leave our rooms is to put the windows wide open, to let in the fresh air, and to throw down the coverings of the beds.

The rooms in which people live can always be kept fresh and sweet by means of *ventilation*, which is the name given to the arrangements that are made to keep up a proper supply of fresh air by the help of the natural movements in the atmosphere.

There are two things that we want to do by means of ventilation. First, to let out used-up air; and, secondly, to let in fresh air. For the first purpose, ventilators are

usually placed near the ceiling, or, in some school-rooms, up in the sloping roof. Sometimes there is a second set of ventilators in the lower part of the room for the second purpose, namely, the letting in of fresh air; but more often it is considered enough to open the windows. Every room in a house ought to be aired daily, whether the room is much used or not: no matter how clean a room may be, it will have a close smell if the window has not been regularly opened.

Why is this? It is because the air has become stale, and stale air will always have a certain smell, and will not be so wholesome to breathe in as fresh air.

But what smells? Not the oxygen; that has no smell. Nor the nitrogen; that has no smell either. Carbonic acid gas has indeed a slight smell, but there is too little of it in the air, when the air is in a proper state, for us to perceive it.

No; it is not the air itself that smells, but something in the air. We cannot see them, except now and then on the path of a sunbeam, but there are always an immense quantity of minute atoms of dust floating in the air. This dust comes from all sorts of substances; some of it is part of the waste of our own bodies, which we get rid of without knowing it. Its natural place of rest is the ground, into which the rain and dew wash it down out of doors, and it sinks into the earth. In a room, it settles, as you know, wherever it can find a place to lodge, and has to be wiped or brushed away, and it is so light that it soon rises again if any draught of air comes to lift it. It is this dust that causes a close smell and spoils the air in a room where the windows have been kept shut, even though no one may have been in the room to use up the air by breathing it, for the chief part of

this dust consists of tiny particles of animal or vegetable matter.

Now, you know that any animal or vegetable refuse is liable to decay, and that when it decays it gives out a bad smell. These tiny particles of dust obey the same law. They decay, and though the smell they give out is small in proportion to their minute size, still it does taint the air, and render it unwholesome, and what we call 'stuffy.'

The only plan to prevent it is not to let the air get stagnant and stale, but to open the windows regularly and let in plenty of fresh supplies.

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## ON THE CRUEL TREATMENT OF ANIMALS.

1.

Will none befriend that poor dumb brute,
  Will no man rescue him?
With weaker effort, gasping much,
  He strains in every limb.

2.

Spare him! O spare him! he feels, he feels:
  Big tears roll from his eyes;
Another crushing blow—he reels,
  Staggers, and falls, and dies.

3.

Poor jaded horse! the blood runs cold,
  Thy guiltless wrongs to see;
To Heaven, O starved one, lame and old,
  Thy dim eye pleads for thee.

4.

Thou, too, O dog, whose faithful zeal
  Fawns on some ruffian grim;
He stripes thy skin with many a weal,
  And yet thou lovest him.

5.

Shame that of all the living chain
  That links creation's plan,
There is but one delights in pain,
  The savage monarch—man.

6.

O Cruelty! who could rehearse
  Thy million dismal deeds,
Or track the workings of the curse
  By which all nature bleeds?

7.

Thou meanest crime, thou coward sin,
  Thou base, flint-hearted vice!
Scorpion! to sting thy heart within
  Thyself shall all suffice.

8.

The merciless is doubly cursed,
  As mercy is 'twice blessed;'
Vengeance, though slow, shall come, but first
  The vengeance of the breast.

A righteous man regardeth the life of his beast; but the tender mercies of the wicked are cruel.—*Proverbs of Solomon*, xii. 10.

## THE TENTYRITES AND THE ICHNEUMON.

| | |
|---|---|
| cir'cumstances. | incur'sions, inroads. |
| croc'odile. | infest'ed, dwelt about, doing mischief. |
| desola'tion, destruction. | | |
| embold'ened, made bolder. | pecu'liar. |
| endeav'oured, tried. | prodig'ious, immensely great. |
| expe'rienced. | Tenty'ra. |
| ichneu'mon. | Tentyri'tes. |

A crocodile of prodigious size and uncommon fierceness infested the banks of the Nile, and spread desolation through all the neighbouring country. He seized the shepherd, together with the sheep, and devoured the herdsman as well as the cattle. Emboldened by success, and the terror which prevailed wherever he appeared, he ventured to carry his incursions even into the island of Tentyra, and to brave the only tamers of his race. The Tentyrites themselves were struck with horror at the appearance of a monster so much more terrible than they had ever seen before. Even the boldest of them dared not to attack him openly; and the most experienced long endeavoured, with all their art and address, to surprise him, but in vain.

As they were consulting together what they should do in these circumstances, an ichneumon stepped forth, and thus addressed them: 'I perceive your distress, neighbours; and though I cannot assist you in the present difficulty, yet give me leave to offer you some advice that may be of use to you for the future. A little prudence is worth all your courage; it may be glorious to overcome a great evil, but the wisest way is to prevent

it. You despise the crocodile while he is small and weak, and do not sufficiently consider, that as he is a long-lived animal, so it is his peculiar property to grow as long as he lives. You see I am a poor, little, feeble creature; yet am I much more terrible to the crocodile, and more useful to the country than you are. I attack him in the egg; and while you are contriving for months together how to get the better of one crocodile, and all to no purpose, I effectually destroy fifty of them in a day.'

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## THE HERMIT AND THE BEAR.

An imprudent friend often does as much mischief by his too great zeal, as the worst enemy could effect by his malice.

A certain hermit having done a good office to a bear, the grateful creature was so sensible of his obligation, that he begged to be admitted as the guardian and companion of his solitude. The hermit willingly accepted his offer, and conducted him to his cell, where they passed their time together in an amicable manner. One very hot day, the hermit having laid himself down to sleep, the officious bear employed himself in driving away the flies from his patron's face: but in spite of all his care, one of the flies perpetually returned to the attack, and at last settled upon the hermit's nose. 'Now I shall have you most certainly,' said the bear, and with the best intentions imaginable, gave him a violent blow on the face, which very effectually indeed demolished the fly, but at the same time most terribly bruised the face of his benefactor.

## A FEUDAL HOUSEHOLD.

1.

The tables were drawn, it was idlesse all;
  Knight, and page, and household squire,
Loitered through the lofty hall,
  Or crowded round the ample fire:
The stag-hounds, weary with the chase,
  Lay stretched upon the rushy floor,
And urged, in dreams, the forest race,
  From Teviot-stone to Eskdale-moor.

2.

Nine-and-twenty knights of fame
  Hung their shields in Branksome Hall;
Nine-and-twenty squires of name
  Brought them their steeds to bower from stall;
    Nine-and-twenty yeomen tall
    Waited, duteous, on them all:
    They were all knights of mettle true,
    Kinsmen to the bold Buccleuch.

3.

Ten squires, ten yeomen, mail-clad men,
Waited the beck of the warders ten;
Thirty steeds, both fleet and wight,
Stood saddled in stable day and night,
Barbed with frontlet of steel, I trow,
And with Jedwood-axe at saddle-bow;
A hundred more fed free in stall:—
Such was the custom of Branksome Hall.

## JOAN OF ARC, THE MAID OF ORLEANS.

approba'tion.
avoca'tions, employment.
chiv'alry, knights.
compar'atively.
Domre'mi.
imagina'tion.
intrepid'ity, bravery.
legit'imacy, lawfulness of birth.
mirac'ulous, done by power more than human.
sor'ceress, one assisted by evil spirits.
superstí'tion.
tes'timony, witness.

By this time (1424) a great social change had taken place in France. The serfs had become the people; and a knight, ruined in the wars, stood, cap in hand, before the citizen whose skill in manufacturing the trappings of chivalry had raised him to wealth. Under such circumstances, it is not likely that the lower classes cared much

about the question of royal legitimacy; and indeed Charles was popularly known as 'the little king of Bourges,' the most important of the few places which still acknowledged the rightful heir of the dynasty. But there were numbers, notwithstanding, who were ashamed of the yoke of a foreign people, by whom they had been beaten so often; and numbers more who regarded with loyal grief and affection the ruined family of their kings. Charles VII. besides, in his own person was a fine handsome young man—gay, amiable, and brave; and many a courtly lady, and many a village maid, looked, through tears, at the image they conjured up of their wandering prince,

'So daring in love, and so dauntless in war,'

yet a fugitive in his country, and an outcast from the throne of his ancestors.

In such stirring times, every little roadside inn becomes a great mart of news, where travellers, as they halt for refreshment, exchange with each other the marvels of the day. In one of these places, at the village of Domremi, on the banks of the Meuse, the stories of the passing guests made a wonderful impression upon the mind of a young girl called Jeanne, or, as we should say in English, Joan d'Arc. Some have styled her a shepherdess, to make her history more poetical; but Joan knew more of horses than of sheep; and instead of leading the solitary life of the hills, she listened from morning till night to the news brought by travellers of the noble struggles and brave defeats of her king; for Joan was nothing more than the maid of the inn. But if there was little poetry in her avocations, there was plenty in her heart; the nobleness of her nature dignified her station; and even

her employment reacted upon her mind; for her custom of riding all sorts of horses, and conversing with all sorts of company, gave a fearlessness to her air and character which would have been unnatural in a shepherdess.

Joan listened, and listened, till her brain seemed on fire. The words lingered in her ear long after the voices had ceased, and they mingled there with other sounds that rose up from the depths of her own romantic heart. In solitude she heard voices and saw visions, the creations, no doubt, of her heated fancy, but not the less inspirations of virtue and heroism. She at length imagined that she—Joan d'Arc, the maid of the village inn—was called by the summons of angels to save her country and her king!

When she presented herself before the governor of Vaucouleurs, the nearest town, and declared her mission, he was much struck by the loftiness of her air, and the calm intrepidity which dignified the graces of a young and beautiful girl. The fortunes of his party were now so desperate, that he caught at her offer as drowning men catch at a straw; and sending her on to Chinon, where Charles was with his bankrupt court, she was introduced into the presence of the king and his knights. Joan immediately singling out Charles, although he was clothed like the rest, knelt at his feet, and declared it to be the will of Heaven that she should drive the English from the siege of Orleans, and lead her prince to Reims, to be anointed there after the manner of his ancestors.

Whether the king believed or not in the young girl's dreams, he determined, if possible, to profit by them. Divines inquired into her mission, and pronounced it to be supernatural; and with the approbation of the parliament, Joan was clothed in armour, mounted on

horseback, and shewn to the people as the heaven-appointed deliverer of France. The very fact of this young girl sitting her steed with the ease and grace of an accomplished warrior, was hailed as a triumphant testimony in her favour; and so the maid of the village inn, with a white standard in one hand, and a drawn sword in the other, set out for Orleans at the head of the bravest chivalry of the time.

The English were confounded by this supernatural visitation; and when they actually saw the Maid of Orleans, as she was now called, sally forth from the city at the head of the garrison, they were seized with astonishment and dismay, driven from their intrenchments, and, in fine, as the dauntless girl had foretold, compelled to raise the siege. The coronation at Reims was the next thing to be accomplished. But how? The whole country between was in the hands of the English, whose armies lined the roads, and whose troops garrisoned the towns. Charles hesitated; but when the maid insisted that he should begin the march immediately, he complied, though able to muster only twelve thousand men. The beautiful warrior, however, was at the head of this comparatively small force; and as savage beasts are fabled to lie down before maiden innocence, so the English hosts retired from the presence of Joan of Arc. She led the king in triumph, as she had promised, to Reims, where he was crowned, and anointed with the holy oil.

The mission of the Maid of Orleans was now accomplished, and all the woman came back into her heart. Her fevered imagination had painted nothing beyond the coronation; and when that was over, she went back in memory to the peaceful village of Domremi, to her domestic affections and girlish loves. She was, in the

common phrase, home-sick; but her entreaties to be released from a position which, when unsupported by religious and patriotic enthusiasm, had become frightful to her feminine tastes, were met by counter-entreaties on the part of the king and his famous leader Dunois. Poor Joan yielded. She hastened to the siege of Compiègne; and in a sally at the head of the garrison, was taken by the English.

The Duke of Bedford, in the meantime, had done everything in his power to restore the energy of the English party, and with that view had brought over the young king of England, Henry VI. and had him crowned and anointed king of France at Paris. But all would not do. The English were beaten from post to post; and when the heroic Maid fell into their hands, they were tempted—not through revenge, it is to be hoped, but through policy—to act a part unworthy of warriors and of men. The deeds of Joan of Arc were reckoned by both parties to be miraculous; but by the one the inspiration was supposed to come from heaven, and by the other from hell. It is with a shudder of shame and horror I relate the sequel. She was tried, and convicted of dealing with the Powers of Darkness; and this heroic girl, whom a more generous superstition would have worshipped, was burned alive for a sorceress!

# THE DESTRUCTION OF SENNACHERIB.

(See 2 Kings xix.)

Ash'ur, Assyria.
Ba'al, the principal idol of the Assyrians.
co'horts, bands of armed men.
Galilee'.
Sennach'erib.

The Assyrian came down like the wolf on the fold,
And his cohorts were gleaming in purple and gold;
And the sheen of their spears was like stars on the sea,
When the blue wave rolls nightly on deep Galilee.
Like the leaves of the forest when Summer is green,
That host with their banners at sunset were seen:
Like the leaves of the forest when Autumn hath blown,
That host on the morrow lay withered and strown.

For the Angel of Death spread his wings on the blast,
And breathed in the face of the foe as he passed;
And the eyes of the sleepers waxed deadly and chill,
And their hearts but once heaved, and for ever grew still!
And there lay the steed with his nostril all wide,
But through it there rolled not the breath of his pride;
And the foam of his gasping lay white on the turf,
And cold as the spray of the rock-beating surf.

And there lay the rider distorted and pale,
With the dew on his brow, and the rust on his mail:
And the tents were all silent, the banners alone,
The lances unlifted, the trumpet unblown.
And the widows of Ashur are loud in their wail,
And the idols are broke in the temple of Baal;
And the might of the Gentile, unsmote by the sword,
Hath melted like snow in the glance of the Lord!

## THE BATTLE OF BANNOCKBURN (1314).

**Ar'gentine.**
**cal'throp**, an instrument having four iron spikes, one of which stands upright when the instrument is thrown on the ground.
**chap'let**, a garland or wreath for the head.
**Christ'endom**, the parts of the world under Christian rule.
**Mar'eschal**, marshal.
**van**, front.

King Edward the Second assembled one of the greatest armies which a king of England ever commanded. There were troops brought from all his dominions. Many brave soldiers from the provinces which the king of England possessed in France—many Irish, many Welsh—and all the great English nobles and barons, with their followers, were assembled in one great army. The number was not less than one hundred thousand men.

King Robert the Bruce summoned all his nobles and barons to join him, when he heard of the great preparation which the king of England was making. They were not so numerous as the English by many thousand men. In fact, his whole army did not very much exceed thirty thousand, and they were much worse armed than the wealthy Englishmen; but then, Robert, who was at their head, was one of the most expert generals of the time; and the officers he had under him were his brother Edward, his nephew Randolph, his faithful follower the Douglas, and other brave and experienced leaders, who commanded the same men that had been accustomed to fight and gain victories under every disadvantage of situation and numbers.

The king, on his part, studied how he might supply, by address and stratagem, what he wanted in numbers and strength. He knew the superiority of the English, both in their heavy armed cavalry, which were much better mounted and armed than that of the Scots, and in their archers, who were better trained than any others in the world. Both these advantages he resolved to provide against. With this purpose, he led his army down into a plain near Stirling, called the Park, near which, and beneath it, the English army must needs pass through a boggy country, broken with water-courses, while the Scots occupied hard dry ground. He then caused all the ground upon the front of his line of battle where cavalry were likely to act, to be dug full of holes about as deep as a man's knee. They were filled with light brushwood, and the turf was laid on the top, so that it appeared a plain field, while in reality it was all full of these pits as a honeycomb is of holes. He also, it is said, caused steel spikes, called calthrops, to be scattered up and down in the plain, where the English cavalry were most likely to advance, trusting in that manner to lame and destroy their horses.

When the Scottish army was drawn up, the line stretched north and south. On the south it was terminated by the banks of the brook called Bannockburn, which are so rocky, that no troops could attack them there. On the left, the Scottish line extended near to the town of Stirling. Bruce reviewed his troops very carefully; all the useless servants, drivers of carts, and such like, of whom there were very many, he ordered to go behind a height, afterwards, in memory of the event, called the Gillies' Hill—that is, the Servants' Hill. He then spoke to the soldiers, and expressed his determination

to gain the victory, or to lose his life on the field of battle. He desired that all those who did not propose to fight to the last, should leave the field before the battle began; and that none should remain except those who were determined to take the issue of victory or death, as God should send it.

When the main body of his army was thus placed in order, the king posted Randolph, with a body of horse, near to the church of St Ninian's, commanding him to use the utmost diligence to prevent any succours from being thrown into Stirling Castle. He then despatched James of Douglas, and Sir Robert Keith, the Mareschal of the Scottish army, in order that they might survey, as nearly as they could, the English force, which was now approaching from Falkirk. They returned with information that the approach of that vast host was one of the most beautiful and terrible sights which could be seen—that the whole country seemed covered with men-at-arms on horse and foot—that the number of standards, banners, and pennons (all flags of different kinds), made so gallant a show, that the bravest and most numerous host in Christendom might be alarmed to see King Edward moving against them.

It was upon the 23d of June 1314 the king of Scotland heard the news that the English were approaching Stirling. He drew out his army, therefore, in the order which he had before resolved on. After a short time, Bruce, who was looking out anxiously for the enemy, saw a body of English cavalry trying to get into Stirling from the eastward. This was the Lord Clifford, who, with a chosen body of eight hundred horse, had been detached to relieve the castle.

'See, Randolph,' said the king to his nephew, 'there is

a rose fallen from your chaplet.' By this he meant, that Randolph had lost some honour, by suffering the enemy to pass where he had been stationed to hinder them. Randolph made no reply, but rushed against Clifford with little more than half his number.

The Scots were on foot. The English turned to charge them with their lances, and Randolph drew up his men in close order to receive the onset. He seemed to be in so much danger, that Douglas asked leave to go and assist him. The king refused him permission.

'Let Randolph,' he said, 'redeem his own fault; I cannot break the order of battle for his sake.' Still the danger appeared greater, and the English horse seemed entirely to encompass the small handful of Scottish infantry. 'So please you,' said Douglas to the king, 'my heart will not suffer me to stand idle and see Randolph perish—I must go to his assistance.' He rode off accordingly; but long before they had reached the place of combat, they saw the English horses galloping off, many with empty saddles.

'Halt!' said Douglas to his men, 'Randolph has gained the day; since we were not soon enough to help him in the battle, do not let us lessen his glory by approaching the field.' Now, that was nobly done; especially as Douglas and Randolph were always contending which should rise highest in the good opinion of the king and the nation.

The van of the English army now came in sight, and a number of their bravest knights drew near to see what the Scots were doing. They saw King Robert dressed in his armour, and distinguished by a gold crown, which he wore over his helmet. He was not mounted on his great war-horse, because he did not expect to fight that evening.

But he rode on a little pony up and down the ranks of his army, putting his men in order, and carried in his hand a sort of battle-axe made of steel. When the king saw the English horsemen draw near, he advanced a little before his own men, that he might look at them more nearly.

There was a knight among the English, called Sir Henry de Bohun, who thought this would be a good opportunity to gain great fame to himself, and put an end to the war, by killing King Robert. The king being poorly mounted, and having no lance, Bohun galloped on him suddenly and furiously, thinking, with his long spear, and his tall powerful horse, easily to bear him down to the ground. King Robert saw him, and permitted him to come very near, then suddenly turned his pony a little to one side, so that Sir Henry missed him with the lance-point, and was in the act of being carried past him by the career of his horse. But as he passed, King Robert rose up in his stirrups, and struck Sir Henry on the head with his battle-axe so terrible a blow, that it broke to pieces his iron helmet as if it had been a nut-shell, and hurled him from his saddle. He was dead before he reached the ground. This gallant action was blamed by the Scottish leaders, who thought Bruce ought not to have exposed himself to so much danger when the safety of the whole army depended on him. The king only kept looking at his weapon, which was injured by the force of the blow, and said: 'I have broken my good battle-axe.'

The next morning, being the 24th of June, at break of day, the battle began in terrible earnest. The English as they advanced saw the Scots getting into line. The Abbot of Inchaffray walked through their ranks barefooted, and exhorted them to fight for their freedom. They

kneeled down as he passed, and prayed to Heaven for victory. King Edward, who saw this, called out: 'They kneel down—they are asking forgiveness.' 'Yes,' said a celebrated English baron, 'but they ask it from God, not from us—these men will conquer, or die upon the field.'

The English king ordered his men to begin the battle. The archers bent their bows, and began to shoot so closely together, that the arrows fell like flakes of snow on a Christmas day. They killed many of the Scots, and might, as at Falkirk and other places, have decided the victory; but Bruce was prepared for them. He had in readiness a body of men-at-arms, well mounted, who rode at full gallop among the archers, and as they had no weapons save their bows and arrows, which they could not use when they were attacked hand to hand, they were cut down in great numbers by the Scottish horsemen, and thrown into total confusion.

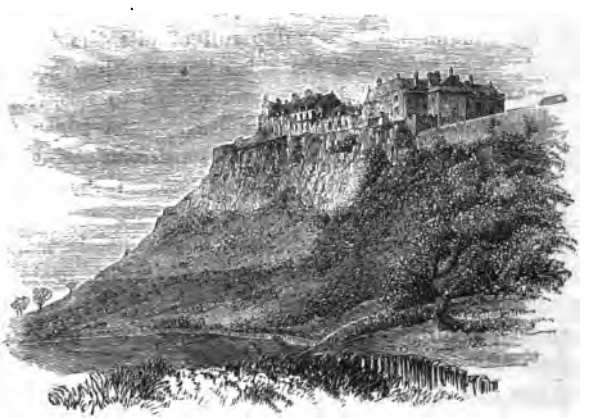
The fine English cavalry then advanced to support their archers, and to attack the Scottish line. But coming over the ground which was dug full of pits, the horses fell into these holes, and the riders lay tumbling about, without any means of defence, and unable to rise, from the weight of their armour. The Englishmen began to fall into general disorder; and the Scottish king, bringing up more of his forces, attacked and pressed them still more closely.

On a sudden, while the battle was obstinately maintained on both sides, an event happened which decided the victory. The servants and attendants on the Scottish camp had, as already told, been sent behind the army, to a place afterwards called the 'Gillies' Hill.' But when they saw that their masters were likely to gain the day, they rushed from their place of concealment with such

weapons as they could get, that they might have their share in the victory and in the spoil. The English, seeing them come suddenly over the hill, mistook this disorderly rabble for another army coming to sustain the Scots, and, losing all heart, began to shift, every man for himself.

Edward first fled to Stirling Castle, and entreated admittance; but Sir Philip Mowbray, the governor, reminded the fugitive sovereign that he was obliged to surrender the castle next day, so Edward was fain to fly through the Torwood, closely pursued by Douglas.

Douglas and Abernethy continued the chase, not giving King Edward time to alight from horseback even for an instant, and followed him as far as Dunbar, where the English had still a friend in the governor, Patrick, Earl of March. The earl received Edward in his forlorn condition, and furnished him with a fishing-skiff, or small ship, in which he escaped to England, having lost his fine army, and a great number of his bravest nobles.



Stirling Castle.

## THE DEATH OF DE BOUNE.

**Ar'gentine.**
**bas'inet, light helmet.**
**Her'eford.**
**Plantag'enet, the family name of the English king.**
**selle, saddle.**
**tour'ney, tournament.**
**van, front of the army.**
**whiles, the whiles, whilst.**
**wight, strong, active.**

The Monarch rode along the van,
The foe's approaching force to scan,
His line to marshal and to range,
And ranks to square, and fronts to change.
Alone he rode—from head to heel
Sheathed in his ready arms of steel;
Nor mounted yet on war-horse wight,
But, till more near the shock of fight,
Reining a palfrey low and light.
A diadem of gold was set
Above his bright steel basinet;
And clasped within its glittering twine
Was seen the glove of Argentine;
Truncheon or leading staff he lacks,
Bearing, instead, a battle-axe.
He ranged his soldiers for the fight
Accoutred thus, in open sight
Of either host.—Three bow-shots far,
Paused the deep front of England's war,
And rested on their arms a while,
To close and rank their warlike file,
And hold high council, if that night
Should view the strife, or dawning light.

Oh, gay, yet fearful to behold,
Flashing with steel and rough with gold,
  And bristled o'er with bills and spears,
With plumes and pennons waving fair,
Was that bright battle-front! for there
  Rode England's King and Peers:
And who, that saw that Monarch ride,
His kingdom battled by his side,
Could then his direful doom foretell?—
Fair was his seat in knightly selle,
And in his sprightly eye was set
Some spark of the Plantagenet.
Though light and wandering was his glance,
It flashed at sight of shield and lance.
'Know'st thou,' he said, 'De Argentine,
Yon knight who marshals thus their line?'—
'The tokens on his helmet tell
The Bruce, my liege: I know him well.'—
'And shall the audacious traitor brave
The presence where our banners wave?'—
'So please my liege,' said Argentine,
'Were he but horsed on steed like mine,
To give him fair and knightly chance,
I would adventure forth my lance.'—
'In battle day,' the King replied,
'Nice tourney rules are set aside.—
Still must the rebel dare our wrath?
Set on him!—sweep him from our path!'
And, at King Edward's signal, soon
Dashed from the ranks Sir Henry Boune.

Of Hereford's high blood he came,
A race renowned for knightly fame.

He burned before his Monarch's eye
To do some deed of chivalry.
He spurred his steed, he couched his lance,
And darted on the Bruce at once.—
As motionless as rocks that bide
The wrath of the advancing tide,
The Bruce stood fast.—Each breast beat high,
And dazzled was each gazing eye:
The heart had hardly time to think,
The eyelid scarce had time to wink,
While on the King, like flash of flame,
Spurred to full speed, the war-horse came!
  The partridge may the falcon mock,
If that slight palfrey stand the shock;—
But swerving from the knight's career,
Just as they met, Bruce shunned the spear.
Onward the baffled warrior bore
His course—but soon his course was o'er!
High in his stirrups stood the King,
And gave his battle-axe the swing.
Right on De Boune, the whiles he passed,
Fell that stern dint—the first, the last!
Such strength upon the blow was put,
The helmet crashed like hazel-nut;
The axe-shaft, with its brazen clasp,
Was shivered to the gauntlet grasp!
Springs from the blow the startled horse,
Drops to the plain the lifeless corse.—
First of that fatal field, how soon,
How sudden, fell the fierce De Boune!

## LESSONS ON HEALTH (4).

### On Water.

absorb', to suck in.
accumula'tion, a heaping up.
con'gregated, gathered together as a flock, assembled.
contam'inate, to pollute, to make unwholesome.
dissolve', to loose asunder, to melt.
fil'ter, a substance through which liquids are strained.
hy'drogen, the gas which produces water.
inflam'mable, that may be caused to burn.
nox'ious, hurtful.
prop'erties, qualities.

Water, like air, was counted by the ancients amongst the four *elements*. And it is an element in one sense, for it enters into the composition of so many different substances. It enters into our bodies, not only in the liquids we drink, but in almost all the food we eat; for water has its part in the making of every kind of food, and often that part is a very large one.

Yet, if by an element is meant a simple unmixed substance, water is not this. It is, like air, a *compound* substance, being compounded of two different sorts of gas—oxygen, of which you have been already told so much, and hydrogen. These two gases, when combined in the proportion of one part of hydrogen to eight parts of oxygen, form the liquid which we call *water*.

Hydrogen is a gas which weighs lighter than any other known substance. It has no colour, taste, or smell; but it has one remarkable property which the gases that compose the atmosphere have not. It is inflammable, that is, it will take fire and burn.

When hydrogen and oxygen are mixed together to form water, they cease to be gases, and change into a liquid; and in the change all their properties are altered. Hydrogen is the lightest of all gases, yet water is not lighter, but heavier, than air. And all animal life is supported by the oxygen in the air; yet most animals cannot breathe for a moment in water, which contains a larger proportion of oxygen than air does.

Water is, however, quite as necessary to us as air; but we use it and receive it into our bodies in an entirely different way. And it is of the greatest consequence to us that the water we drink should be wholesome.

Now, it is not very easy to get water that is *perfectly* pure, that is to say, water which consists of *nothing but* oxygen and hydrogen, because of that peculiar property, which water and other liquids possess, of dissolving and absorbing what is put into them; but if the water we drink is free from what is injurious to the health, it is pure enough for all practical purposes.

Some things water cannot dissolve, such as glass, for example, or marble. Other things it can only partly dissolve, such as earth or sand, which colours the water in which it is held. Other things, such as salt or sugar, water can dissolve entirely, so that they disappear altogether, and do not alter the *look* of the water at all.

Now, think how terrible a thing it would be if some poisonous substance were to get into the water we drink, and be so entirely absorbed that we could not see that it was there, and yet it would give the water its own evil properties, so that those who drank of it should be poisoned! This does sometimes really happen.

Water has a peculiar power of absorbing the bad gases which rise up out of drains, or from decaying animal and

vegetable matter, and it is a fatal thing for the health to drink water from a well which has been dug too near a drain, or anything of that sort. For such water is as poisonous to drink as the bad gases are to breathe; and it is quite common for any one who drinks such water to fall ill with typhoid fever, or cholera, or some other dreadful illness. Sometimes poisoned water has a bad smell, but very often it has not; all heads of families should, therefore, be very particular when taking a new house to see what the water supply is, and whether it is in a wholesome state, and the pump in a proper position, and not in the nearest possible neighbourhood to what is most likely to contaminate the water. And where butts or cisterns are used, the greatest possible care and trouble should be taken to clean them out regularly, so as not to have any accumulation of mud and filth at the bottom, and to cover them at the top, so as to prevent the dust from getting in. Water cannot hold an unlimited quantity of anything in solution, that is to say, in a dissolved state; it lets what it cannot hold drop to the bottom, and such droppings are called a deposit. It is not good to have a deposit of black mud at the bottom of a cistern, to make the water smell badly, and to be stirred up every time any fresh water comes in.

When water is thick and muddy-looking, or when it has an earthy taste, it can be made good for drinking by pouring it through a filter. But even a filter will fail to correct the poisonous qualities of water that has been contaminated by drains, though it may do some little good. Boiling, too, which destroys the liveliness and freshness of water, may in some degrees correct the poisonous qualities of this kind of water by destroying the *germs* or seeds of disease that it contains.

But the best way is not to drink it at all. Water is often brought to large towns from miles and miles away, by means of pipes. London and Edinburgh, for example, are supplied in this way. In a town where numbers of human beings are congregated together, such water is far more to be depended upon than water from wells. Unless the wells are extremely deep, some noxious refuse or other is sure to find its way into them, and then, alas for the health of those who drink of that water!

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## LESSONS ON HEALTH (5).

### THE HUMAN SKIN.—CLEANLINESS.

**assim'ilated**, made like, made one with.
**commu'nicate with**, pass to.
**cu'ticle**.
**epider'mis**, that which lies on the *dermis* or true skin, the outer skin.
**impu'rities**, substances not pure or clean.
**inces'santly**, without ceasing.
**invig'orating**, making strong.
**mem'brane**, a very thin covering.
**perspira'tion**, that which is breathed through the skin, sweat.
**purifica'tion**, the act of making pure or clean.
**unfor'tunately**.

There is another use to which we put water, besides using it to quench our thirst. *We use it to wash with.* And this use of water is only a very little less important than the other. It is true that people would quickly die if they could not get water to drink, whilst, on the other hand, people do not *quickly die* for want of washing. And yet it is not possible for them to *keep in health* if they do not keep themselves clean. Personal cleanliness

means the keeping clean of our own persons—that is to say, of our own skins.

The skin covers the whole of the outside of the human body; it also lines the mouth and throat, and other portions of the interior of the body. But the kind of skin which covers the parts which are not seen, is not exactly the same as the skin which covers the outside, and has to be washed and kept clean; and it is with this outer skin that we have now to do.

It is a much thicker substance than ignorant people are accustomed to fancy, for it is made up of three coats or layers, one above the other. The uppermost of these is called the *epidermis* or *cuticle*. As it is intended to protect what it covers, it is not *sensitive*; that is to say, it does not feel pain. It is not tender to the touch.

Then comes a very thin, transparent membrane; and then below that the true skin, called the *dermis* or *cutis*, to which the epidermis or cuticle is merely the outer covering. The true skin needs such a covering, because it is exceedingly sensitive, and very tender to the touch, as we soon find whenever by any accident a bit of the outer skin is rubbed off, and the true skin is laid bare.

Neither the outer skin, which does not feel pain, nor the inner skin, which is very sensitive to pain, has merely to be a covering and nothing else. The whole skin has besides to take its share in the active work of keeping the body in healthful repair.

There are two ways in which this has to be done. First, by taking in fresh supplies of nourishment in the shape of air, food, and water, to build up the material of the body, and to keep up the activity of life in it; secondly, by carrying off the waste and refuse, of which it is needful that the body should rid itself. Just as a

fire requires to be fed with fuel, which it consumes as it burns, and must also have air to burn in; so must the human body be fed with food, and also have air in which to breathe.

Everything that goes into the body undergoes changes. That which is needed for the growth and support of the body is *assimilated*—that is to say, it becomes a part of the body. That which is not needed is separated from it, and cast out, carrying with it the waste and decay that is worn off from the body itself. It does not go out the same as it came in, but often in a very changed and altered state.

Now, the whole of the outer surface of the skin is covered with tiny holes, which are called *pores*. They are like the little holes or pores in the leaves of trees and plants, and one part of their office is nearly the same, namely, to drink in air. Only the pores of the leaves drink in carbonic acid gas and give out oxygen; and the pores of the skin drink in oxygen and give out carbonic acid, just as the lungs do. So, you see, we breathe with our skin as well as with our lungs.

But this is not all. When we give back the air from our lungs, we send forth with it a certain quantity of watery vapour, and you can prove this for yourselves by breathing on glass, and noticing how immediately it will become clouded with the moisture of your breath. But the skin also is incessantly occupied in getting rid of moisture that the body no longer wants. It throws it off through the pores in the form of perspiration. It is said that there are seven millions of pores in the body, and these pores are the outlets of an equal number of minute tubes which communicate with the little glands in the dermis, in which the sweat is secreted.

The glands themselves are also shaped like small tubes or pipes. Their office is to draw all impurities out of the blood, and send it out of the body by the pores of the skin. Perspiration is not pure water, though it looks like water. It is water mixed with various impurities, which are to be drained out of our bodies by the means that I have described. This is one use of perspiration. Another is to regulate the heat of the body.

You all know that when the body becomes very hot, either because the weather is warm, or because of hard work and active exercise, it perspires to such a degree as to become quite wet with perspiration. This is the way in which the extra heat, which the body does not require, is thrown off; and by means of this relief a man is often able to endure a wonderful degree of heat.

Now, you see what an important work the skin of the body has to do. Can you not imagine what an injurious thing it must be, if anything happens to interrupt it?

What is likely to interrupt it? Dirt will.

If the pores of the skin are choked with dirt, the perspiration will not be able to make its way through them. It will be checked, and the impurities which ought to have been washed out of the body, will, to a great extent, be imprisoned and prevented from escaping. I say, to a *great* extent, because if perspiration were *entirely* stopped, we should die; and it cannot be very seriously hindered without great injury to the health. The pores of the skin, then, should be kept open by frequent and regular washing, both with cold and warm water. It is, unfortunately, hardly possible for cottagers to indulge in the daily cold bath which wealthier people have learnt to regard almost as a necessary of life, so invigorating and healthful do they find it; but it is not really out of their power to enjoy

something of the delicious feeling of freshness and vigour which follows the use of the sponge upon first rising. I am very much afraid that there are people who leave their rooms in the morning without washing at all, thinking that it will be enough to 'clean themselves,' as they call it, later in the day. Others just dip the end of a towel in water, soap it a little, and pass it over the face and neck.

Now, I will tell you what is a much better thing to do the first thing in the morning. Take a sponge and a basin of cold water, and give not only your face and neck, but your chest, and arms, and shoulders, a thorough good sponging, lasting several minutes. Then rub yourself quickly dry with a roughish towel. You do not know, until you try it, how this will wake you up, and put you all in a glow of life and activity with which to begin the day's work. But for *cleanliness* something more than cold water is required. For this we must have warm water, and also soap; and as warm water cannot be had, by those who must rise before fires are lighted, till later in the day, it is quite reasonable to put the washing with warm water off until the dirtiest part of the day's work is over. But this ought not to be supposed to take away any need for the daily sponging with cold water I have advised you to use at first rising. And, besides this, every one ought to try to have a good wash *all over* once a week.

By this means the pores of your skin will, at anyrate, not be choked with dirt, and will be able to carry on unhindered their healthful work of purification. More than this, your whole nature will benefit by strict attention to personal cleanliness. You will not only *feel* better, more active and ready for anything that you have to do, but you will *look* better. Your eyes will be brighter, and there will be a fresher colour in your cheek.

## THE BURIAL OF SIR JOHN MOORE.

General Sir John Moore was born at Glasgow in 1761. During the Peninsular War, in which the English assisted the Spanish against the French, he was forced to retreat to Corunna to embark his soldiers. As soon as the embarkation had begun, they were attacked by the French, who, in the battle that ensued, were defeated with great loss, but Moore, struck by a cannon-ball on the left shoulder, died in the moment of victory.

1.

Not a drum was heard, not a funeral note,
As his corpse to the rampart we hurried;
Not a soldier discharged his farewell shot
O'er the grave where our hero we buried.

2.

We buried him darkly at dead of night,
The sods with our bayonets turning;
By the struggling moonbeam's misty light,
And the lantern dimly burning.

3.

No useless coffin inclosed his breast,
Not in sheet nor in shroud we wound him;
But he lay like a warrior taking his rest,
With his martial cloak around him.

4.

Few and short were the prayers we said,
And we spoke not a word of sorrow;
But we steadfastly gazed on the face that was dead,
And we bitterly thought of the morrow.

5.

We thought as we hollowed his narrow bed,
And smoothed down his lonely pillow,

That the foe and the stranger would tread o'er his head,
And we far away on the billow!

6.

Lightly they 'll talk of the spirit that 's gone,
And o'er his cold ashes upbraid him—
But little he 'll reck, if they let him sleep on
In the grave where a Briton has laid him.

7.

But half of our heavy task was done,
When the clock struck the hour for retiring;
And we heard the distant and random gun
That the foe was sullenly firing.

8.

Slowly and sadly we laid him down,
From the field of his fame fresh and gory;
We carved not a line, and we raised not a stone—
But we left him alone with his glory.

The following is the passage in the *Edinburgh Annual Register* (1808) on which the above ode was founded: 'Sir John Moore had often said that if he was killed in battle, he wished to be buried where he fell. The body was removed at midnight to the citadel of Corunna. A grave was dug for him on the ramparts there by a body of the 9th regiment, the aides-de-camp attending by turns. No coffin could be procured, and the officers of his staff wrapped the body, dressed as it was, in a military cloak and blankets. The interment was hastened; for about eight in the morning some firing was heard, and the officers feared that if a serious attack were made, they should be ordered away, and not suffered to pay him their last duty. The officers of his family bore him to the grave; the funeral-service was read by the chaplain; and the corpse was covered with earth.'

## BATTLE OF BALACLAVA—CAVALRY CHARGE.

The cavalry who have been pursuing the Turks on the right are coming up to the ridge beneath us, which conceals our cavalry from view. The Heavy Brigade in advance is drawn up in two lines. The first line consists of the Scots Greys, and of their old campanions in glory, the Enniskilleners; the second, of the 4th Royal Irish, of the 5th Dragoon Guards, and of the 1st Royal Dragoons. The Light Cavalry Brigade is on their left, in two lines also. The silence is oppressive; between the cannon-bursts one can hear the champing of bits and the clink of sabres in the valley below. The Russians on their left drew breath for a moment, and then in one grand line dashed at the Highlanders. The ground flies beneath their horses' feet; gathering speed at every stride, they dash on towards that *thin red streak topped with a line of steel.* The Turks fire a volley at eight hundred yards, and run. As the Russians come within six hundred yards, down goes that line of steel in front, and out rings a rolling volley of Minié musketry. The distance is too great; the Russians are not checked, but still sweep onward through the smoke, with the whole force of horse and man, here and there knocked over by the shot of our batteries above. With breathless suspense every one awaits the bursting of the wave upon the line of Gaelic rock; but ere they come within a hundred and fifty yards, another deadly volley flashes from the levelled rifle, and carries death and terror into the Russians. They wheel about, open files right and left, and fly back faster than they came. 'Bravo,

Highlanders! well done!' shout the excited spectators; but events thicken. The Highlanders and their splendid front are soon forgotten; men scarcely have a moment to think of this fact, that the 93d never altered their formation to receive that tide of horsemen. 'No,' said Sir Colin Campbell, 'I did not think it worth while to form them even four deep!' The ordinary British line, two deep, was quite sufficient to repel the attack of these Muscovite cavaliers. Our eyes were, however, turned in a moment on our own cavalry. We saw Brigadier-general Scarlett ride along in front of his massive squadrons. The Russians—evidently *corps d'élite*—their light blue jackets embroidered with silver lace, were advancing on their left, at an easy gallop, towards the brow of the hill. A forest of lances glistened in their rear, and several squadrons of grey-coated dragoons moved up quickly to support them as they reached the summit. The instant they came in sight, the trumpets of our cavalry gave out the warning blast which told us all that in another moment we should see the shock of battle beneath our very eyes. Lord Raglan, all his staff and escort, and groups of officers, the Zouaves, French generals and officers, and bodies of French infantry on the height, were spectators of the scene, as though they were looking on the stage from the boxes of a theatre. Nearly every one dismounted and sat down, and not a word was said. The Russians advanced down the hill at a slow canter, which they changed to a trot, and at last nearly halted. Their first line was at least double the length of ours—it was three times as deep. Behind them was a similar line, equally strong and compact. They evidently despised their insignificant-looking enemy; but their time was come. The trumpets rang out again

through the valley, and the Greys and Enniskilleners went right at the centre of the Russian cavalry. The space between them was only a few hundred yards; it was scarce enough to let the horses 'gather way,' nor had the men quite space sufficient for the full play of their sword-arms. The Russian line brings forward each wing as our cavalry advance, and threatens to annihilate them as they pass on. Turning a little to their left, so as to meet the Russian right, the Greys rush on with a cheer that thrills to every heart—the wild shout of the Enniskilleners rises through the air at the same instant. As lightning flashes through a cloud, the Greys and Enniskilleners pierced through the dark masses of Russians. The shock was but for a moment. There was a clash of steel and a light play of sword-blades in the air, and then the Greys and the redcoats disappear in the midst of the shaken and quivering columns. In another moment we see them emerging and dashing on with diminished numbers and in broken order against the second line, which is advancing against them as fast as it can, to retrieve the fortune of the charge. It was a terrible moment. 'God help them! they are lost!' was the exclamation of more than one man, and the thought of many. With unabated fire the noble hearts dashed at their enemy. It was a fight of heroes. The first line of Russians—which had been smashed utterly by our charge, and had fled off at one flank and towards the centre—were coming back to swallow up our handful of men. By sheer steel and sheer courage, Enniskillener and Scot were winning their desperate way right through the enemy's squadrons, and already grey horses and red coats had appeared right at the rear of the second mass, when, with irresistible force, like one bolt from a bow

the 1st Royals, the 4th Dragoon Guards, and the 5th Dragoon Guards rushed at the remnants of the first line of the enemy, went through it as though it were made of pasteboard, and, dashing on the second body of Russians as they were still disordered by the terrible assault of the Greys and their companions, put them to utter rout.

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## UNCLE TOBY AND THE FLY.

| | |
|---|---|
| in'juries. | obtuse'ness. |
| insensibil'ity. | occa'sions. |
| intellec'tual. | retal'iate. |

'My uncle Toby was a man patient of injuries—not from want of courage, where just occasions called it forth, nor from any insensibility or obtuseness of his intellectual parts. He was of a peaceful, placid nature; no jarring element in it, all was mixed up so kindly. My uncle Toby had scarce a heart to retaliate upon a fly. "Go," says he one day at dinner to an overgrown one which had buzzed about his nose, and tormented him cruelly all dinner-time, and which, after many attempts, he had caught at last, as it flew by him; "I'll not hurt thee," says my uncle Toby, rising from his chair, and going across the room with the fly in his hand; "I'll not hurt a hair of thy head! Go," says he, lifting up the sash, and opening his hand as he spoke, to let it escape—"go, poor wretch! get thee gone: why should I hurt thee? This world is surely wide enough to hold thee and me."'

# EYES, AND NO EYES;

## OR, THE ART OF SEEING.

| | |
|---|---|
| ar'tifice. | parasit'ical. |
| curios'ities. | partic'ular. |
| entertained'. | pros'pect. |
| Hal'cyon. | superior'ity. |
| hand'kerchief. | ven'omous. |

'Well, Robert, where have you been walking this afternoon?' said Mr Andrews to one of his pupils at the close of a holiday.

*R.* I have been, sir, to Broom-heath, and so round by the windmill upon Camp-mount, and home through the meadows by the river-side.

*Mr A.* Well, that's a pleasant round.

*R.* I thought it very dull, sir; I scarcely met with a single person. I would rather have gone along the turnpike road.

*Mr A.* Why, if seeing men and horses is your object, you would, indeed, be better entertained on the high-road. But did you see William?

*R.* We set out together, but he lagged behind in the lane, so I walked on and left him.

*Mr A.* That was a pity. He would have been company for you.

*R.* Oh, he is so tedious, always stopping to look at this thing and that! I had rather walk alone. I daresay he has not got home yet.

*Mr A.* Here he comes. Well, William, where have you been?

*W.* O sir, the pleasantest walk! I went all over Broom-heath, and so up to the mill at the top of the hill, and then down among the green meadows by the side of the river.

*Mr A.* Why, that is just the round Robert has been taking, and he complains of its dullness, and prefers the high-road.

*W.* I wonder at that. I am sure I hardly took a step that did not delight me, and I have brought home my handkerchief full of curiosities.

*Mr A.* Suppose, then, you give us some account of what amused you so much. I fancy it will be as new to Robert as to me.

*W.* I will, sir. The lane leading to the heath, you know, is close and sandy, so I did not mind it much, but made the best of my way. However, I spied a curious thing enough in the hedge. It was an old crab-tree, out of which grew a great bunch of something green, quite different from the tree itself. Here is a branch of it.

*Mr A.* Ah! this is mistletoe, a plant of great fame for the use made of it by the Druids of old in their religious rites. It bears a very slimy white berry. It is one of those plants which do not grow in the ground by a root of their own, but fix themselves upon other plants; whence they have been styled *parasitical*, as being hangers-on, or dependents.

*W.* A little farther on I saw a green woodpecker fly to a tree, and run up the trunk like a cat.

*Mr A.* That was to seek for insects in the bark, on which they live. They bore holes with their strong

bills for that purpose, and do damage to the trees by it.

*W.* When I got upon the open heath, how charming it was! The air seemed so fresh, and the prospect on every side so free and unbounded! Then it was all covered with gay flowers, many of which I had never observed before. I saw, too, several birds that were new to me. There was a pretty grayish one, of the size of a lark, that was hopping about some great stones; and when he flew he shewed a great deal of white above his tail.

*Mr A.* That was a wheat-ear. They are reckoned very delicious birds to eat, and frequent open downs in various localities in considerable numbers.

*W.* There was a flock of lapwings upon a marshy part of the heath, that amused me much. As I came near them, some of them kept flying round and round just over my head, and crying *peeweet* so distinctly one might fancy they almost spoke. I thought I should have caught one of them, for it flew as if one of its wings was broken, and often tumbled close to the ground; but as I came near, he always made a shift to get away.

*Mr A.* Ha! you were finely taken in then! This was all an artifice of the bird's to entice you away from its nest; for they build upon the bare ground, and their nests would easily be observed, did they not draw off the attention of intruders by their loud cries and counterfeit lameness.

*W.* I wish I had known that, for it led me a long chase, often over shoes in water. However, it was the cause of my falling in with an old man and a boy who were cutting and piling up turf for fuel. They gave me a creature I never saw before—a young viper, which they

had just killed. I have seen several common snakes, but this is thicker in proportion, and of a darker colour than they are.

*Mr A.* True. Vipers frequent those turfy boggy grounds pretty much, and I have known several turf-cutters bitten by them.

*W.* They are very venomous, are they not?

*Mr A.* Enough so to make their wounds painful and dangerous, though they seldom prove fatal.

*W.* Well—I then took my course up to the wind-mill on the mount. I climbed up the steps of the mill, in order to get a better view of the country round. What an extensive prospect! I counted fifteen church-steeples; and I saw several gentlemen's houses peeping out from the midst of green woods and plantations; and I could trace the windings of the river all along the low grounds, till it was lost behind a ridge of hills. From the hill I went straight down to the meadows below, and walked on the side of a brook that runs into the river. It was all bordered with reeds and flags and tall flowering plants, quite different from those I had seen on the heath. As I was getting down the bank to reach one of them, I heard something plunge into the water near me. It was a large water-rat, and I saw it swim over to the other side, and go into its hole. There were a great many large dragon-flies all about the stream. I caught one of the finest, and have got him here in a leaf. But how I longed to catch a bird that I saw hovering over the water, and every now and then darted down into it! It was all over a mixture of the most beautiful green and blue, with some orange colour. It was somewhat less than a thrush, and had a large head and bill, and a short tail.

*Mr A.* I can tell you what that bird was—a kingfisher, the celebrated Halcyon of the ancients, about which so many tales are told. It lives on fish, which it catches in the manner you saw. It builds in holes in the banks, and is a shy retired bird, never to be seen far from the stream where it lives.

*W.* I must try to get another sight at him, for I never saw a bird that pleased me so much. Well—I followed this little brook till it entered the river, and then took

Kingfisher.

the path that runs along the bank. On the opposite side I observed several little birds running along the shore, and making a piping noise. They were brown and white, and about as big as a snipe.

*Mr. A.* I suppose they were sand-pipers, one of the numerous family of birds that get their living by wading among the shallows, and picking up worms and insects.

*W.* There were a great many swallows, too, sporting upon the surface of the water, that entertained me with their motions. Sometimes they dipped in the stream; sometimes they pursued one another so quick, that the

eye could scarcely follow them. In one place, where a high steep sandbank rose directly above the river, I observed many of them go in and out of holes with which the bank was bored full.

*Mr A.* Those were sand-martins, the smallest of our species of swallows. They are of a mouse-colour above, and white beneath. They make their nests and bring up their young in these holes, which run a great depth, and by their situation are generally secure from all plunderers.

*W.* A little farther I saw a man in a boat, who was catching eels in an odd way. He had a long pole with broad iron prongs at the end, just like Neptune's trident, only there were five instead of three. This he pushed straight down among the mud in the deepest parts of the river, and fetched up the eels sticking between the prongs.

*Mr A.* I have seen this method. It is called eel-spearing.

*W.* While I was looking at him, a heron came flying over my head, with his large flagging wings. He lit at the next turn of the river, and I crept softly behind the bank to watch his motions. He had waded into the water as far as his long legs would carry him, and was standing with his neck drawn in, looking intently on the stream. Presently he darted his long bill as quick as lightning into the water, and drew out a fish, which he swallowed. I saw him catch another in the same manner. He then took alarm at some noise I made, and flew away slowly to a wood at some distance, where he settled.

*Mr A.* Probably his nest was there, for herons build upon the loftiest trees they can find, and usually in society together like rooks.

*W.* I then turned homeward across the meadows, where I stopped awhile to look at a large flock of starlings which kept flying about at no great distance. I could not tell at first what to make of them; for they rose all together from the ground as thick as a swarm of bees, and formed themselves into a kind of black cloud, hovering over the field. After taking a short round, they settled again, and presently rose again in the same manner. I daresay there were hundreds of them.

Starling.

*Mr A.* Perhaps so; for in the fenny counties their flocks are so numerous as to break down whole acres of reeds by settling on them.

*W.* I got to the high field next our house just as the sun was setting, and I stood looking at it till it was quite lost. What a glorious sight! The clouds were tinged with purple and crimson and yellow of all shades and hues, and the clear sky varied from blue to a fine green at the horizon. But how large the sun appears

just as it sets! I think it seems twice as big as when it is overhead.

*Mr A.* It does so; and you may probably have observed the same apparent enlargement of the moon at its rising.

*W.* I have; but, pray, what is the reason of this?

*Mr A.* It is an optical deception, depending upon principles which I cannot well explain to you till you know more of that branch of science. But what a number of new ideas this afternoon's walk has afforded you! I do not wonder that you found it amusing; it has been very instructive too.—Did *you* see nothing of all these sights, Robert?

*R.* I saw some of them, but I did not take particular notice of them.

*Mr A.* Why not?

*R.* I don't know. I did not care about them, and I made the best of my way home.

*Mr A.* That would have been right if you had been sent on a message; but as you only walked for amusement, it would have been wiser to have sought out as many sources of it as possible. But so it is—one man walks through the world with his eyes open, and another with them shut; and upon this difference depends all the superiority of knowledge the one acquires above the other. While many a vacant, thoughtless youth is whirled throughout Europe without gaining a single idea worth crossing a street for, the observing eye and inquiring mind find matter of improvement and delight in every ramble in town or country. Do you, then, William, continue to make use of your eyes; and you, Robert, learn that eyes were given you to use.

## THE STREAMLET.

1.

I saw a little streamlet flow
  Along a peaceful vale,
A thread of silver, soft and slow,
  It wandered down the dale;
Just to do good it seemed to move,
Directed by the hand of love.

2.

The valley smiled in living green;
  A tree, which near it gave
From noon-tide heat a friendly screen,
  Drank from its limpid wave.
The swallow brushed it with her wing,
And followed its meandering.

3.

But not alone to plant and bird
  That little stream was known,
Its gentle murmur far was heard—
  A friend's familiar tone!
It glided by the cotter's door,
It blessed the labour of the poor.

4.

And would that I could thus be found,
  While travelling life's brief way,
A humble friend to all around,
  Where'er my footsteps stray;
Like that pure stream, with tranquil breast,
Like it, still blessing, and still blest.

## LESSONS ON HEALTH (6).

### On Food—Mastication.

**den'tist**, one who attends to diseases of the teeth.
**diges'tion**, act of being dissolved.
**enam'el**, the smooth, hard, outer coating of the teeth.
**expres'sion**, that which is expressed or said.
**lis'some**, supple, elastic.
**mastica'tion**, the chewing of food.
**prepar'atory**, preparing for.
**sali'va**, the fluid in the mouth used to mix with the food.
**substan'tial**, having substance, solid.

The third great necessary of life, food, differs from the other two, air and water, in a very important respect.

Air and water are always the same. The only difference ever to be noticed in them is a difference of quality; they may be good or bad, pure or impure, and so on. But in food there is an endless variety, not of quality only, but of kind.

It is a common expression to speak of a man's working for his *bread*, but everybody understands that bread means a great many things besides *loaves*. What it means depends very much upon the nation to which a man belongs, and the country in which he happens to have been born. In India, where it is very hot, millions of people live entirely upon rice. They do not care for such substantial food as the inhabitants of colder climates require. In Greenland, and other parts of the Arctic Regions, fish is the chief article of diet. Here in England we probably make use of as great a variety of food as is to be met with anywhere, for we are a seafaring nation, and our ships bring us in supplies of all sorts from the uttermost parts of the earth.

All this variety has to serve a single purpose, that, namely, of nourishing our bodies. This is what our food has to do; but it has to undergo a considerable change before it is fit for its work. It must pass through what is called the process of digestion, and be made into blood. It is the blood which, as long as we live, never ceases to carry fresh supplies of life into every part of our frame, and it is from the food we eat that these fresh supplies are daily drawn.

I need hardly remind you that our blood is not, like our food, sometimes one thing and sometimes another; it is always the same. Our food is sometimes bread, sometimes meat, sometimes fish, sometimes fruit or vegetables, but blood is always blood and nothing else; and before the various substances that serve us for food can mix with the blood to nourish it, they must lose all their distinctness, and become, like the blood, liquid and uniform. This is the object of what is called the process of digestion; namely, to convert all the food we eat, first, into a liquid called *chyme* (from a Greek word which means a liquid), and next, to separate the nourishing portion of our food from the chyme, in the shape of a finer and more delicate liquid called *chyle* (from another Greek word, which means juice that has been drawn out of something), leaving the remainder to be carried out of the body by channels appointed for the purpose. The first step towards this end is the mastication of food in the mouth before it is swallowed.

Mastication means crushing and breaking into little pieces. This is what has to be done to every morsel of food that we put into our mouths, and in our teeth we have an admirable set of instruments exactly suited to the work. There are the *cutting* teeth in front,

sharp-edged at the top for *biting;* and at the sides and back of the mouth, the single-pointed and double-pointed teeth for *tearing*, and the large square-topped grinders for *grinding* the food.

But the teeth are, as you know, immovably fixed in the jaws; and though the lower jaw moves up and down during the act of chewing, the teeth can but move with it, and chew what is placed ready for them; they cannot get at the food for themselves.

How, then, is it placed within their reach?

This is done by the swift-moving and lissome tongue, one of the smallest members of our body, but also one of the most important, for we can neither speak nor eat without its help. It receives whatever food is put into the mouth, and moves it about between the teeth until it has been properly chewed. The tongue is also the seat of one of the five senses, that of taste, by which we perceive differences in our food, so that some kinds seem more agreeable to us than others.

Besides this there are a number of little glands in the mouth, under the tongue and elsewhere, which contain a watery fluid called the saliva. It is the saliva which keeps the mouth moist and comfortable at all times; but when we are eating, a larger flow of it takes place, for it has to help the teeth and the tongue in the work of mastication, by mixing with the food as it is chewed, and making it moist and soft.

When the food has been thus ground and moistened into a sort of soft paste, the tongue rolls it up into balls, and passes it to the back of the throat ready for swallowing. There is a tube at the back of the throat called the gullet, down which the food is carried into the stomach.

Now, you know there is something else which has to

pass down your throat as well as your food—namely, the air you breathe. So, besides the gullet there is another tube called the windpipe, which opens into your mouth. If your food were to slip down the windpipe instead of the gullet, you would be choked, and to guard against this danger the windpipe has a little door at the top, a sort of lid or flap, which shuts down at the very moment that the food is passing, and then opens again. Sometimes a crumb does get down the wrong way by accident, and then comes a violent fit of coughing to force it up again. The food does not drop down the gullet; it is moved slowly along by a curious pushing motion in the sides of the tube itself, and so is gradually carried into the stomach, where the work of digestion, properly so called, begins.

But before we go on to that, I want to ask you to remember one or two practical lessons that the history of the first or preparatory process of mastication, suggests to us.

First, it teaches us that we ought not to eat too fast, to allow time for the food to be properly masticated. Because if we bolt our food, *i. e.* swallow it in little more than half-chewed lumps, it enters the stomach in an unprepared state, is digested with pain and difficulty, and will not nourish us half so well as the same food properly masticated would do.

Next, we learn the importance of taking care of our teeth. Not only does a decayed tooth often cause us intense pain, but, if many of our teeth become useless and have to be taken out, the work of mastication cannot be done as it ought to be done with the diminished number that are left.

Now, the chief things which are apt to cause the teeth

to decay are: First, *ill health.* This, of course, you cannot help. After a fever, for example, the teeth will sometimes decay so rapidly that several will have to be taken out in the course of a few months. But you may do something to *lessen* the mischief by being extra particular, as far as lies in your power, to clean your teeth frequently and regularly all the time you are ill, and especially after taking medicine. It is true that during fever it is not advisable to clean your teeth *with a brush.* The mouth is then in such a state that anything like rubbing with a brush might injure the enamel, or polished outer surface of the teeth. Instead of this, the mouth should be frequently rinsed with water, or, still better, Condy's fluid and water, and from time to time a sponge dipped in Condy's fluid and water may be gently passed over the teeth.

Secondly, *Want of cleanliness.* Everybody ought to possess a toothbrush, and to clean the teeth with it *at least* once a day; but I am afraid many neglect this rule, which ought to be as much a matter of course as washing your face and hands.

Thirdly, *Improper food.* Many children may be said to destroy their teeth by their too great fondness for sweets. They forget that in buying sweets, they often buy toothache into the bargain.

## LESSONS ON HEALTH (7).

### On Food.—Digestion.

**consid'erable.**
**disenga'ges**, unfastens, separates.
**gas'tric**, belonging to the stomach.
**indigest'ible**, not easily digested.
**infirm'ities**, weaknesses.
**inhab'itants.**
**intes'tines**, tubes proceeding downwards from the stomach.
**pulp'y**, like pulp, of the nature of a soft mass.
**pylo'rus**, the lower opening of the stomach.

[*See Illustration, page* 133.]

We must now ask what becomes of our food after we have swallowed it.

'It goes into the stomach to be digested,' some one answers.

Quite right. This much I daresay you all know. But I daresay there are many of you who have only a very dim notion what the stomach is like, and what this work of digestion is which is carried on in it. The stomach, then, is a kind of bag or pouch, made of several coats, or layers, of different kinds of skin. It is large enough to hold from three to five pints, and it is of an irregularly oblong shape, with two openings in it.

The food enters—one mouthful at a time—at the upper opening, and, directly it comes in, a sort of movement begins in the sides of the stomach, which spreads it abroad, and keeps gently churning it about, whilst, at the same time, from numbers of little glands in the innermost coat of the stomach, a fluid issues called the gastric juice,

and mixes with the food, which it has a peculiar power of melting and dissolving. This mixing and moving about goes on until the food is entirely dissolved, and changed into a smooth pulpy liquid, which goes by the name of chyme. Some kinds of food turn into chyme much sooner than others, and we say of such food that it is very easy to digest; whilst other kinds take a very long time—pork, it is said, takes more than five hours—and of these we say that they are very indigestible.

The second or lower opening in the stomach is the outlet by which the digested food leaves the stomach and passes into the intestines. This opening goes by the name of the pylorus, a word borrowed from the Greek language, which means a door-keeper; and it is so called because the pylorus is both a door and a keeper of the door at one and the same time. Its duty is to let the food out of the stomach as soon as it has been turned into chyme, but not before, and accordingly it shuts itself for hours together against any food which is still in an undigested state, and will not let it pass, sending it back again and again to be made more fit to go through. Sometimes, however, when people have eaten too fast and too much, and have loaded the stomach with more food than it possibly *can* digest, the pylorus at last gets tired of keeping the way, and does let it through, only half digested though it may be. But you all know how bad it is to eat too much, and how much pain and uneasiness it will often cause; and eating unwholesome food—food, that is, which the stomach can only digest with great difficulty, will have much the same effect.

It would take too long, and give your memory too many hard words to remember, if I were to try to describe to you exactly what further processes our food

has to go through on its way to mingle with the blood.

For it is by no means quite ready to do so directly the pylorus has let it out of the stomach. No; the chyme is simply the whole of our food in a digested state, but the *whole* of the food we eat is not nourishing. The next thing to be done, therefore, is to make a separation, and to divide the nourishing portion from that which is not nourishing. This takes place as the chyme is slowly passed onwards through the close-packed lengths of tubing which are called the intestines. Just as, in the mouth, the saliva mingled with the food to soften it, and, in the stomach, the gastric juice, to dissolve it, so here, other juices are found which mingle with the food for a third purpose, which is, to cause this separation of which I have spoken. The nourishing portion of the food disengages itself from the rest in the shape of the liquid called chyle, which is so thin and fine that it will pass through the smallest vessels. Then the waste, that portion of our food, I mean, which is not nourishing, is carried downwards out of the body, whilst by countless tubes and ducts the chyle travels upwards, to be poured into some large veins near the neck, where it mixes with the blood, and is carried with it to the heart.

You see of how much consequence it is that our food should be properly digested. 'Indigestion' is a common and fruitful cause of endless diseases, and infirmities, and discomforts.

## LESSONS ON HEALTH (8).

### On Food—Circulation of the Blood.

**ar'teries**, tubes that convey the blood from the heart.
**com'plex**, not simple.
**exhaust'ed**, consumed.
**extract'ed**, drawn out.
**imme'diately.**
**mix'gles**, becomes mixed.
**protect'ed.**
**reinvig'orating**, making strong again.

We have traced the progress of our food from the time that it enters the mouth in the shape, let us say, of a morsel of bread, to the time when, some hours later, the nourishment that has been extracted from it by the various processes that have been described, is poured into our veins in the shape of the thin, white fluid to which the name of *chyle* has been given.

It is by this means that the blood receives new supplies of life and vigour, which it carries to every part of the body, renewing, reviving, and reinvigorating the whole frame as it passes through it.

The central spot from which the blood starts on its travels, and to which it returns when it has completed its rounds, is the heart. Its journey through the body is called the *circulation of the blood*, for this very reason, namely, that it travels in a circle, coming back again to the point from which it started.

To circulate means to travel in a circle. The blood in the veins, with which the chyle mingles, is blood that has nearly completed its round. It has been all

through the body, visiting hands, and feet, and brain, and every other part, refreshing and reviving as it went; and now it is returning to the heart, having changed from a bright, fresh red, which was its colour when it started, to a dark purple, which is the colour that blood acquires when it has travelled far, and exhausted its virtues, and wants to be renewed.

Well, the chyle mingles with it, and both together are carried into the heart.

What does the heart do with it, do you think? Does it send it forth again at once on a fresh journey, seeing that fresh nourishment *has* been put into it by the chyle?

No; the life-giving properties cannot be restored to the blood in this rough and ready way. You must already have observed that the changes which take place in the body are of a much more delicate and complex kind. Besides, the blood cannot be renewed simply by feeding it with chyle. It wants something more; something that is not a fluid, and will act upon it in a different way. This something is the oxygen which we draw into our lungs when we breathe.

So the first thing the heart does with the dark purple worn-out blood and the fresh supply of chyle, which the veins have brought in, is to send both together on a short journey through the lungs. Here they come in contact with the oxygen in the air, and immediately the colour of the blood changes, and it becomes a bright, vivid red. This change is the outward sign that the renewal of the blood is complete. It has become altogether pure and new, and has regained all its life-supporting properties. Swiftly it returns to the heart, and as swiftly the heart sends it forth once more; this time not on a short

journey round the lungs, but right onward through the whole body.

The channels by which the blood is sent outward from the heart are called arteries; those by which the blood returns are called veins.

What do you feel when you put your hand to your left side? You feel the throbbing of your heart; the regular movement, that is, that your heart makes as it sends forth the blood.

What do you feel if you put your finger on your wrist? You feel your pulse beat; that is, you feel the movement of the blood through one of the arteries, which lies beneath that spot. See, it is a regular movement just like the other, and answers exactly to the beating of the heart.

You may see the purple veins lie near the surface in many parts of the body, but the arteries are more carefully protected, because the blood flows so strongly and rapidly through them that it is of great importance to shelter them from accident. If an artery is wounded, a man must bleed to death in a very short time unless the flow of blood can be stopped.

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## HEALTH.

O blessed health! thou art above all gold and treasure. 'Tis thou that enlargest the soul, and openest all its powers to receive instruction, and to relish virtue. He that has thee has little more to wish for; and he that is so wretched as to want thee, wants everything with thee! STERNE.

## FROM 'THE DESERTED VILLAGE.'

SWEET Auburn! loveliest village of the plain,
Where health and plenty cheered the labouring swain,
Where smiling spring its earliest visit paid,
And parting summer's lingering blooms delayed:
Dear lovely bowers of innocence and ease,
Seats of my youth, when every sport could please,
How often have I loitered o'er thy green,
Where humble happiness endeared each scene!
How often have I paused on every charm,
The sheltered cot, the cultivated farm,
The never-failing brook, the busy mill,
The decent church that topt the neighbouring hill,
The hawthorn bush, with seats beneath the shade,
For talking age and whispering lovers made!
How often have I blessed the coming day,
When toil remitting lent its turn to play,
And all the village train, from labour free,
Led up their sports beneath the spreading tree,
While many a pastime circled in the shade,
The young contending as the old surveyed;
And many a gambol frolicked o'er the ground,
And sleights of art and feats of strength went round:
And still, as each repeated pleasure tired,
Succeeding sports the mirthful band inspired;
The dancing pair that simply sought renown
By holding out to tire each other down;
The swain mistrustless of his smutted face,
While secret laughter tittered round the place;

The bashful virgin's sidelong looks of love,
The matron's glance that would those looks reprove.
These were thy charms, sweet village! sports like these,
With sweet succession, taught even toil to please;
These round thy bowers their cheerful influence shed;
These were thy charms—but all these charms are fled.

Sweet smiling village, loveliest of the lawn,
Thy sports are fled, and all thy charms withdrawn;
Amidst thy bowers the tyrant's hand is seen,
And desolation saddens all thy green:
One only master grasps the whole domain,
And half a tillage stints thy smiling plain.
No more thy glassy brook reflects the day,
But choked with sedges, works its weary way;
Along thy glades, a solitary guest,
The hollow-sounding bittern guards its nest;
Amidst thy desert walks the lapwing flies,
And tires their echoes with unvaried cries.
Sunk are thy bowers in shapeless ruin all,
And the long grass o'ertops the mouldering wall;
And, trembling, shrinking from the spoiler's hand,
Far, far away, thy children leave the land.

Ill fares the land, to hastening ills a prey,
Where wealth accumulates, and men decay:
Princes and lords may flourish, or may fade—
A breath can make them, as a breath has made:
But a bold peasantry, their country's pride,
When once destroyed, can never be supplied.

A time there was, ere England's griefs began,
When every rood of ground maintained its man;
For him light labour spread her wholesome store,
Just gave what life required, but gave no more:
His best companion, innocence and health,
And his best riches ignorance of wealth.

But times are altered; trade's unfeeling train
Usurp the land, and dispossess the swain:
Along the lawn, where scattered hamlets rose,
Unwieldy wealth and cumbrous pomp repose;
And every want to luxury allied,
And every pang that folly pays to pride,
Those gentle hours that plenty bade to bloom,
Those calm desires that asked but little room,
Those healthful sports that graced the peaceful scene,
Lived in each look, and brightened all the green;
These, far departing, seek a kinder shore,
And rural mirth and manners are no more.

Sweet Auburn! parent of the blissful hour,
Thy glades forlorn confess the tyrant's power.
Here, as I take my solitary rounds,
Amidst thy tangling walks and ruined grounds,
And, many a year elapsed, return to view
Where once the cottage stood, the hawthorn grew,
Remembrance wakes with all her busy train,
Swells at my breast, and turns the past to pain.

In all my wand'rings round this world of care,
In all my griefs—and God has given my share—

I still had hopes my latest hours to crown,
Amidst these humble bowers to lay me down;
To husband out life's taper at the close,
And keep the flame from wasting by repose.
I still had hopes, for pride attends us still,
Amidst the swains to shew my book-learned skill,
Around my fire an evening group to draw,
And tell of all I felt, and all I saw;
And, as a hare, whom hounds and horns pursue,
Pants to the place from whence at first he flew,
I still had hopes, my long vexations past,
Here to return—and die at home at last.

O blest retirement, friend to life's decline,
Retreats from care that never must be mine,
How blest is he who crowns, in shades like these,
A youth of labour with an age of ease;
Who quits a world where strong temptations try,
And, since 'tis hard to combat, learns to fly!
For him no wretches, born to work and weep,
Explore the mine, or tempt the dangerous deep;
No surly porter stands, in guilty state,
To turn imploring famine from the gate;
But on he moves to meet his latter end,
Angels around befriending virtue's friend;
Sinks to the grave with unperceived decay,
While resignation gently slopes the way;
And, all his prospects brightening to the last,
His heaven commences ere the world be past!

Sweet was the sound, when oft at evening's close
Up yonder hill the village murmur rose;

There, as I passed with careless steps and slow,
The mingling notes came softened from below;
The swain responsive as the milk-maid sung,
The sober herd that lowed to meet their young;
The noisy geese that gabbled o'er the pool,
The playful children just let loose from school;
The watch-dog's voice that bayed the whispering wind,
And the loud laugh that spoke the vacant mind;
These all in sweet confusion sought the shade,
And filled each pause the nightingale had made.
But now the sounds of population fail,
No cheerful murmurs fluctuate in the gale,
No busy steps the grass-grown footway tread,
For all the blooming flush of life is fled.
All but yon widowed, solitary thing,
That feebly bends beside the plashy spring;
She, wretched matron—forced in age, for bread,
To strip the brook with mantling cresses spread,
To pick her wintry fagot from the thorn,
To seek her nightly shed, and weep till morn—
She only left of all the harmless train,
The sad historian of the pensive plain!

Near yonder copse, where once the garden smiled,
And still where many a garden flower grows wild;
There, where a few torn shrubs the place disclose,
The village preacher's modest mansion rose.
A man he was to all the country dear,
And passing rich with forty pounds a year;
Remote from towns he ran his godly race,
Nor e'er had changed, nor wished to change his place;

Unpractised he to fawn, or seek for power,
By doctrines fashioned to the varying hour,
Far other aims his heart had learned to prize,
More skilled to raise the wretched than to rise.
His house was known to all the vagrant train,
He chid their wanderings, but relieved their pain;
The long-remembered beggar was his guest,
Whose beard descending swept his aged breast;
The ruined spendthrift, now no longer proud,
Claimed kindred there, and had his claims allowed;
The broken soldier, kindly bade to stay,
Sat by his fire, and talked the night away,
Wept o'er his wounds, or, tales of sorrow done,
Shouldered his crutch and shewed how fields were won.
Pleased with his guests, the good man learned to glow,
And quite forgot their vices in their woe;
Careless their merits or their faults to scan,
His pity gave ere charity began.
Thus to relieve the wretched was his pride,
And e'en his failings leaned to virtue's side;
But in his duty, prompt at every call,
He watched and wept, he prayed and felt for all;
And, as a bird each fond endearment tries
To tempt its new-fledged offspring to the skies,
He tried each art, reproved each dull delay,
Allured to brighter worlds, and led the way.
Beside the bed where parting life was laid,
And sorrow, guilt, and pain, by turns dismayed,
The reverend champion stood. At his control
Despair and anguish fled the struggling soul;
Comfort came down the trembling wretch to raise,
And his last faltering accents whispered praise.

At church, with meek and unaffected grace,
His looks adorned the venerable place;
Truth from his lips prevailed with double sway,
And fools, who came to scoff, remained to pray.
The service past, around the pious man,
With ready zeal, each honest rustic ran;
E'en children followed, with endearing wile,
And plucked his gown, to share the good man's smile:
His ready smile a parent's warmth expressed,
Their welfare pleased him, and their cares distressed;
To them his heart, his love, his griefs were given,
But all his serious thoughts had rest in heaven.
As some tall cliff that lifts its awful form,
Swells from the vale, and midway leaves the storm,
Though round its breast the rolling clouds are spread,
Eternal sunshine settles on its head.

Beside yon straggling fence that skirts the way
With blossomed furze unprofitably gay—
There, in his noisy mansion, skilled to rule,
The village master taught his little school;
A man severe he was, and stern to view,
I knew him well, and every truant knew;
Well had the boding tremblers learned to trace
The day's disaster in his morning face;
Full well they laughed with counterfeited glee
At all his jokes, for many a joke had he;
Full well the busy whisper, circling round,
Conveyed the dismal tidings when he frowned;
Yet he was kind, or if severe in aught,
The love he bore to learning was in fault.

The village all declared how much he knew;
'Twas certain he could write and cipher too;
Lands he could measure, terms and tides presage,
And even the story ran that he could gauge.
In arguing, too, the parson owned his skill,
For e'en though vanquished, he could argue still;
While words of learned length and thund'ring sound
Amazed the gazing rustics ranged around,
And still they gazed, and still the wonder grew
That one small head should carry all he knew.

But past is all his fame. The very spot,
Where many a time he triumphed, is forgot.
Near yonder thorn that lifts its head on high,
Where once the sign-post caught the passing eye,
Low lies that house where nut-brown draughts inspired,
Where gray-beard mirth and smiling toil retired,
Where village statesmen talked with looks profound,
And news much older than their ale went round.
Imagination fondly stoops to trace
The parlour-splendours of that festive place;
The white-washed wall, the nicely-sanded floor,
The varnished clock that clicked behind the door;
The chest contrived a double debt to pay,
A bed by night, a chest of drawers by day;
The pictures placed for ornament and use,
The twelve good rules, the royal game of goose;
The hearth, except when winter chilled the day,
With aspen boughs, and flowers and fennel gay;
While broken tea-cups, wisely kept for show,
Ranged o'er the chimney, glistened in a row.

Vain transitory splendours! could not all
Reprieve the tottering mansion from its fall?
Obscure it sinks, nor shall it more impart
An hour's importance to the poor man's heart;
Thither no more the peasant shall repair
To sweet oblivion of his daily care;
No more the farmer's news, the barber's tale,
No more the woodman's ballad shall prevail;
No more the smith his dusky brow shall clear,
Relax his ponderous strength and lean to hear;
The host himself no longer shall be found
Careful to see the mantling bliss go round;
Nor the coy maid, half willing to be pressed,
Shall kiss the cup to pass it to the rest.

Yes! let the rich deride, the proud disdain,
These simple blessings of the lowly train,
To me more dear, congenial to my heart,
One native charm, than all the gloss of art;
Spontaneous joys, where nature has its play,
The soul adopts, and owns their first-born sway:
Lightly they frolic o'er the vacant mind,
Unenvied, unmolested, unconfined.
But the long pomp, the midnight masquerade,
With all the freaks of wanton wealth arrayed,
In these, ere triflers half their wish obtain,
The toiling pleasure sickens into pain;
And, even while fashion's brightest arts decoy,
The heart distrusting asks, if this be joy?

. . . . . .

To distant climes, a dreary scene,
Where half the convex world intrudes between,
Through torrid tracks with fainting steps they go,
Where wild Altama murmurs to their woe.
Far different there from all that charmed before,
The various terrors of that horrid shore;
Those blazing suns that dart a downward ray,
And fiercely shed intolerable day;
Those matted woods where birds forget to sing;
But silent bats in drowsy clusters cling;
Those poisonous fields with rank luxuriance crowned,
Where the dark scorpion gathers death around;
Where at each step the stranger fears to wake
The rattling terrors of the vengeful snake;
Where crouching tigers wait their hapless prey,
And savage men more murderous still than they;
While oft in whirls the mad tornado flies,
Mingling the ravaged landscape with the skies.
Far different these from every former scene,
The cooling brook, the grassy-vested green,
The breezy covert of the warbling grove,
That only sheltered thefts of harmless love.

Good Heaven! what sorrows gloomed that parting day,
That called them from their native walks away;
When the poor exiles, every pleasure past,
Hung round the bowers, and fondly looked their last—
And took a long farewell, and wished in vain
For seats like these beyond the western main—
And, shuddering still to face the distant deep,
Returned and wept, and still returned to weep.
The good old sire, the first prepared to go
To new-found worlds, and wept for others' woe;

But for himself, in conscious virtue brave,
He only wished for worlds beyond the grave.
His lovely daughter, lovelier in her tears,
The fond companion of his helpless years,
Silent went next, neglectful of her charms,
And left a lover's for a father's arms.
With louder plaints the mother spoke her woes,
And blessed the cot where every pleasure rose,
And kissed her thoughtless babes with many a tear,
And clasped them close, in sorrow doubly dear;
Whilst her fond husband strove to lend relief
In all the silent manliness of grief.

# LESSONS ON PHYSICAL GEOGRAPHY.

## I. The Earth—Its Form and Size.

The earth on which we live appears to be a large flat surface, consisting partly of land and partly of water, and for many ages this was the common belief. But now we know that the earth is not flat, but round like a ball or globe. The earth is a ball of such an enormous size, and we see such a very small portion of it at one time, that we cannot help thinking that we live on a flat surface. There are many ways by which scientific men have proved that the earth is a globe, and any one may discover this fact for himself. When we stand on the sea-shore and watch a distant ship approaching the land, we cannot see the whole ship at once; but first we perceive only the topsails of the vessel; then, as it comes nearer, we see the lower sails; and when it is still nearer to us, the hull or body of the ship also comes in sight. On the other hand, just as a vessel approaching the shore comes gradually within sight, so a vessel leaving the shore as gradually disappears from view. The hull is first lost sight of, then the lower sails, then the topsails, till at last no part of the vessel is visible. Now, these appearances can only be accounted for by the roundness of the earth. If the surface of the earth were flat they could not happen, for then the observer would see both the upper and the lower parts of the vessel equally well at all distances, so long as it remains within the range of his sight; but the earth being round, he cannot

possibly see the lower part of the ship until it comes nearer to him.

Fig. 1.

It will now be easily understood that a sailor nearing the land must see first the hills or rising grounds before the lower parts of the surface appear in sight, and that the land can be seen at a great distance from the top of the mast when it cannot be seen at all from the deck. The roundness of the earth is further shewn in going up a hill. We then obtain a more extensive view of the surface around, and the higher we ascend the wider the view becomes in all directions. Another proof, but one which we cannot all try for ourselves, is the fact that ships have sailed *round* the world, returning to the point from which they started without the direction of their course having been changed. The first to circumnavigate or sail round the globe was Magellan, a Portuguese, in 1519; and similar voyages have since been made by the famous Drake, an Englishman, the celebrated Captain Cook, and by many others.

The earth, though round in form, is not, however, a perfect globe or *sphere*. A sphere is a body every part of whose surface is equally distant from a point in the

inside called its centre. This definition does not exactly apply to the earth, because it is somewhat flattened at the two ends called *poles*, and it bulges out at the *equator*, an imaginary line round the middle of the earth, dividing it into two equal parts. The form of the earth is therefore said to be that of a *spheroid* or body nearly of the shape of a sphere. This shape is somewhat similar to that of an orange. The earth is of immense size. If a rope were put round its middle or broadest part, it would measure nearly 25,000 miles, a distance which it would take a man walking three miles an hour for twelve hours every day nearly two years to accomplish. A line drawn through the centre of the earth would measure nearly 8000 miles. The measure through the earth is called its *diameter*, and the measure round, its *circumference*. The surface of the earth is estimated at nearly 200 millions of square miles.

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## II. Land and Water.

The surface of the earth consists of land and water, the water occupying the deep hollows of the land. The land is composed of solid or rocky materials, but our direct knowledge of these extends only to a very small depth, forming as it were a mere rind of the globe, which is spoken of as the earth's *crust*. It is considered probable, however, that the earth is solid from at least half the distance from its surface to its centre. A knowledge of the rocks which form the earth's crust is obtained from the science of *Geology*, a word which means 'a description of the earth.'

On examining the terrestrial globe, or a map of the world, we find that the land of the globe is entirely surrounded by water, and that the water occupies a much larger portion of the earth's surface than the land, nearly three-fourths of it being water, and only a little more than one-fourth being land.

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## III. The Land.

The Land consists of two great masses held compactly together, and hence called *continents*. These are named the Eastern Continent and the Western Continent, because the first contains all the land to the east of an imaginary line drawn through London, and stretching from pole to pole; and the second all the land to the west of this line. The Eastern Continent is also called the Old World, and the Western Continent the New World, because the former was the only land known to the ancients. The New World did not become known to Europeans until nearly the conclusion of the fifteenth century, when it was discovered by Columbus.

The Eastern Continent extends in great breadth from north-east to south-west over more than one half of the circumference of the globe, and is nearly twice the size of the Western Continent, which is long and narrow, stretching almost from pole to pole. For the sake of convenience, both continents are divided into portions, which are themselves called continents, each containing a number of different countries. The Eastern Continent is divided into the continents of Europe, Asia, and Africa. Europe embraces

an area of four million square miles; Africa is three times the size of Europe, and Asia more than four times. The Western Continent is divided into North America and South America, each of which is nearly double the size of Europe. In addition to these five continents, the large island of Australia, to the south-east of Asia, and the numerous islands lying near it, are comprehended in a division of the land, to which the name of Oceania has been given. There are thus six great divisions of the land — Europe, Asia, Africa, North America, South America, and Oceania.

Several remarkable points of resemblance and difference between the two great continents have been noticed by geographers. Of these the more important are the following:

1. Both continents are wedge-shaped, expanding and approaching each other towards the north, while they separate and narrow down to points in the south.

2. Both continents have their greatest extent from east to west along the same parallel of latitude, 50° N., so that a great part of Asia, Europe, and North America is in the temperate zone, while only the East India Islands, and the narrower parts of Africa and South America, are subjected to the extreme heat of the equator.

3. In each continent, a large portion is almost entirely separated from the principal mass, Africa being nearly detached from the Old World, and South America from the New.

4. In both continents all the great peninsulas point to the south, the only important exceptions being Jutland in the Old World, and Yucatan in the New, which stretch to the north; and Asia Minor in the Old World,

and Alaska (formerly called Russian America) in the New, which point to the west.

5. The opposite coasts of the two continents separated by the Atlantic Ocean are remarkable for their correspondence to each other, the indentations of the one corresponding to the projections of the other. Thus, the opening between Ireland and Spain corresponds to the projection of North America at Newfoundland, the Caribbean Sea to the projection of Africa at Senegambia, and the Gulf of Guinea to the projection of Brazil at Cape St Roque.

6. The greatest length of the Old World is from east to west. The greatest length of the New World is from north to south. Accordingly, Europe and Asia extend through similar zones of climate, while America crosses nearly all the zones, and hence presents a much greater diversity of phenomena.

7. As both continents have their principal mountain-ranges in the direction of their greatest length, the mountain-ranges and table-lands in the two continents take opposite directions.

*Coast-lines.* — Some of the continents are deeply indented, having peninsulas, gulfs, and inland seas, which give them a long line of coast; while others are more compact, presenting a coast uniform and unbroken, and consequently proportionally shorter. In the words of Guyot: 'Africa is a body without members, a tree without branches. Asia is a mighty trunk, the members of which make only a fifth of its mass. In Europe, the members overrule the body, the branches cover the trunk; the peninsulas form almost a third of its entire surface. Africa is closed to the ocean; Asia opens only its margins; Europe surrenders entirely to it, and is in consequence

the most accessible of all the continents.' North America, in the outline of its coast, is more like Europe, and South America like Africa.

Europe has an extent of coast in proportion to its area more than double that of any of the other continents, and fully three times more than that of Africa. North America has nearly double that of any of the others, except Australia, and nearly three times that of Africa. To these facts are due to a great extent the pre-eminence of Europe and North America in industry and civilisation, and the backwardness in these respects of Africa.

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## IV. Mountains—Table-lands—Plains.

Mountains are elevations of the earth's surface rising to a height of more than 1000 feet above the level of the sea. Lesser eminences are called Hills. Mountains generally appear in *chains* or *ranges*, consisting either of one central chain, with branches running off at right angles, or of several chains or ridges running parallel to each other; and in both cases often accompanied by subordinate chains of minor elevation. Several chains form a *group*, and several groups a *system*.

The following are the principal points connected with the elevation of the land:

1. The great elevations of a continent lie in the direction of its greatest length.

In the Eastern Continent, whose greatest length is from west to east, the line of elevation begins with the Atlas and Spanish mountains in the west, is continued in

the Alps, Carpathians, and Caucasus, and attains its highest elevation in the Himalayas. These ranges form the great water-sheds of the Old World, throwing the rivers to the north and south of them.

In the Western Continent, whose greatest length is from north to south, the line of elevation begins with the Rocky Mountains on the shores of the Arctic Ocean, and terminates with the Andes extending to Patagonia.

2. In all the continents, the line of greatest elevation is not in the centre, but more towards one side than the other. From this result two slopes of unequal length and inclination, the long slope being called the *slope,* and the short one the *counter-slope.* The slope, of course, produces lengthened rivers; the counter-slope short and rapid ones.

The Old World rises by a long, gentle slope from the Northern and Atlantic Oceans, and descends abruptly to the east and south; the New World has long and gentle slopes towards the Atlantic and Northern Oceans, but a rapid descent to the Pacific. These facts account for the number of large rivers that flow into the Atlantic and Arctic Oceans.

Associated with mountain-systems are extensive elevated plains called *table-lands* or *plateaux,* from which the lofty mountain-heights rise like ramparts. These table-lands form, in some instances, the nucleus of continents, and the source of their largest rivers. In Asia, for example, all the great rivers flow—north, east, south, and west—from the central region, which really forms a succession of elevated plateaux, ranging from 3000 to 17,000 feet above the level of the sea.

The most elevated, numerous, and extensive plateaux are found in the Old World. In Asia, the plateau of

Tibet has an extent of 1800 miles in length and 500 in breadth, with an elevation of from 12,000 to 17,000 feet; in Africa, the Abyssinian plateau rises to a height of 10,000 feet; in Europe, the highest table-land is that of Switzerland, between 3000 and 4000 feet. In the New World, the highest table-lands are those connected with the Andes, which attain a height of about 14,000 feet, and the extensive table-land of Mexico.

Lowland plains are extensive tracts, whose surface in the main is level, or but slightly broken by elevations and depressions, and whose general level is not much above the sea. Plains differ much in appearance, according to the nature of their soil and climate, and exhibit every degree of fertility, from the irreclaimable sterility of the sandy deserts of Africa to the luxuriant vegetation of the American silvas.

The Old World has been termed the world of mountains and table-lands; the New World is the world of plains, which occupy about two-thirds of its surface. The principal tracts are:

*The great central plain of North America*, consisting of alternate forest and grassy prairie, lying between the Rocky and the Alleghany Mountains, and extending with but little interruption from the shores of the Arctic Ocean to the Gulf of Mexico, a length of nearly 2400 miles.

*The Llanos*, or grassy plains occupying the basin of the Orinoco.

*The Selvas of the Amazon*, the largest river-basin in the world, impenetrable from their dense vegetation.

*The Pampas of Buenos Ayres*, with the *Patagonian desert*, stretching from the mountains of Brazil to the southern extremity of the continent.

In the Old World two great belts of lowland occur, one north and the other south of the great mountain-ridge. The north plain begins with the flats of Holland, and stretches through Germany and Russia to the steppes of the Caspian Sea and Siberia, being broken only by the Ural Mountains. The southern lowland is a vast desolate tract, beginning with the Sahara, on the shores of the Atlantic, and stretching, with few interruptions, across Africa, into Arabia, Persia, and Northern India.

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## V. The Water.

The Water on the earth's surface, strictly speaking, forms one great ocean, no part of which is cut off from the rest by the intervention of land. For the sake of convenience, however, it is considered as divided into five partial oceans. These are the *Atlantic Ocean*, between the western coasts of the Old World and the eastern coasts of the New World; the *Pacific Ocean*, between the eastern coasts of the Old World and the western coasts of the New World; the *Indian Ocean*, lying south of Asia and east of Africa; the *Arctic Ocean*, lying round the North Pole; and the *Antarctic Ocean*, lying round the South Pole. The Atlantic Ocean has an area of about twenty-five million square miles; the Pacific is the largest ocean, and is nearly three times the size of the Atlantic; the Indian Ocean is considerably smaller than the Atlantic; and the Arctic and Antarctic Oceans are each about the size of Europe. It is interesting to notice that if we consider the land as consisting of *three* continents—the Old World, the New World, and Australia, and the water

as consisting of three oceans—the Pacific, Atlantic, and Indian Oceans (the Arctic and Antarctic Oceans being included in these), it will be found that the three oceans correspond in position and extent to the three land masses,

The Pacific Ocean corresponding to the Old World,
The Atlantic Ocean " " New World,
The Indian Ocean " " Australia.

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## VI. The Atmosphere.

The Atmosphere is the name given to the envelope of air which surrounds the earth. It grows thinner as its distance from the earth increases, until at a height—supposed to be—of from 45 to 50 miles it becomes so rare as to be inappreciable. The atmosphere is the medium by which sound is transmitted: it modifies and retains the heat of the sun: to it are due the gradual shading of day into night; and many other phenomena; and without it there would be no life on the earth. One of the most important properties of the atmosphere is its *pressure*, which is so great that a man of ordinary stature is exposed to a weight of about fourteen tons. No inconvenience, however, results from this, as the air presses equally on every part of the body, and is also counterbalanced by the pressure outwards of the air from within the body itself. This pressure of the atmosphere explains many common phenomena, such as the fly's walking on the roof and walls of a room, the rise of water in pumps, the action of a boy's sucker in lifting stones, the sticking of snails to stones, &c. The pressure or weight of the

atmosphere is measured by an instrument called the Barometer, or 'weight-measurer,' also called the Weather-glass; and its heat by another called the Thermometer, or 'heat-measurer.'

Air is composed chiefly of two invisible gases, *nitrogen* and *oxygen*. There are four parts of nitrogen to one of oxygen. Besides these, air contains a small proportion of another gas called *carbonic acid gas*, because it is formed from carbon or charcoal, and a small quantity of *watery vapour*, for the air is never found to be absolutely dry. Oxygen is essential to the support of animal life, and is the most active constituent of the atmosphere. Nitrogen forms the bulk of the atmosphere, and performs the important part of diluting the oxygen, which, if it occurred alone, would act with too great intensity. Carbonic acid gas forms the chief ingredient in the food of vegetables, which draw it largely from the air. Watery vapour, though a small ingredient of the atmosphere, is very important in its effects. From seas, lakes, rivers, and all bodies containing moisture, this water is continually rising to make the dew, the mist, and the clouds, which, again, in the form of rain and snow, descend to moisten and nourish the earth.

*Evaporation*, or the turning of water into vapour, is caused by heat; and *condensation*, or the turning of vapour into water again, is caused by cold. Vapour is always invisible until it becomes condensed by cold. The steam of boiling water in a kettle cannot be seen inside the kettle or at the mouth of the spout; but it becomes visible, in the form of a small white cloud, as soon as it is condensed by coming in contact with the cold air around. The warmer the air is, the greater is the amount of moisture that rises into the atmosphere

in the form of vapour. The atmosphere, however, can contain only a certain amount of aqueous vapour according to the temperature. When it has received as much as it is capable of holding, it is said to be *saturated.* When the air has become saturated with vapour, and anything occurs to cool it, then part of the invisible vapour is condensed, becomes visible, and appears as dew, mists, clouds, &c.

During the day, the earth and the objects on its surface receive a large amount of heat from the sun; but after sunset, these objects begin to radiate this heat, or throw it off from them in rays like the beams of the sun. Thus, they soon become colder than the surrounding air. When the air has remained for some time in contact with these objects, a portion of its vapour becomes condensed into specks of water, which adhere to the objects, and are called *dewdrops.* The degree or point of temperature at which dew begins to fall is called the *dewpoint.* Dew falls most copiously on a calm clear night, when there are no dense clouds to prevent the radiation of the heat. When the temperature of the surface bedewed becomes reduced below the point of freezing by the amount of the radiation of heat, then the vapour is frozen, and forms *hoar-frost.*

The watery vapour is also condensed in the form of a general haze covering the whole sky, and coming down to the surface of the earth. This is called *mist* or *fog. Clouds* are masses of haze floating in the higher regions of the sky, which do not descend to the ground. They moderate the rays of the sun by day, and the radiation or passing off of heat from the earth's surface by night. When, however, a cloud becomes sufficiently condensed by cold, the vapoury particles of which it is composed

increase in number, and begin to descend by their own weight. During their descent, they become larger, by running into each other, till the air can no longer support them, and they fall to the ground as *raindrops*. When raindrops fall through a layer of air below thirty-two degrees, they become frozen, and are then called *hailstones*. When moisture is formed in air under thirty-two degrees, the watery particles are frozen into crystals, which uniting fall to the ground as *snow*, which, being a non-conductor of heat, protects the soil, and its seeds and plants.

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## VII. Winds.

A current of air is called a *wind*, and is caused chiefly by the unequal distribution of heat. Air being expanded by heat, the heated and lighter portions of the atmosphere ascend, and the surrounding colder portions rush in to supply their place.

Winds vary in velocity from a few miles to a hundred miles an hour: from one mile an hour, the rate of *a breath of air*, to forty miles an hour, that of *a strong gale;* fifty, that of a storm; and one hundred, that of a violent hurricane. Winds are distinguished as North, South, East, or West, &c. according to the point of the compass *from* which they blow—a north wind, for example, being one that blows from the north. Winds are divided into constant or trade winds, periodical winds, and variable winds.

*The Trade-winds.*—The heat of the tropical regions being so much greater than that of the polar zones, it follows that, if the earth were at rest, the heated air of

the equatorial regions would ascend and form warm upper-currents flowing towards the poles, and the cold air of the polar regions would rush in colder under-currents towards the equator. There would then be a constant north wind in the northern hemisphere, and a constant south wind in the southern hemisphere. But as the earth, with its surrounding atmosphere, turns round on its axis from west to east every twenty-four hours, with a velocity at the equator a thousand times greater than near the poles, the polar currents, as they approach the equator, move from west to east much more slowly than the earth, by which they are, as it were, left behind, and so appear to move in the opposite direction—from east to west. Thus the current from the North Pole becomes a north-east wind; and that from the South Pole, a south-east wind. Within thirty degrees on each side of the equator, these winds preserve a steady course throughout the year, and, from the service they render to navigation, have been termed *trade-winds*. These winds are most regular in the Atlantic and Pacific Oceans.

The north and south trades meet in a belt, about five degrees in breadth, stretching across the Atlantic and Pacific, parallel to the equator. Here they neutralise each other, and heavy rains and thunder-storms occur almost daily. This belt is called the *Region of Calms*. Beyond the region of calms, the prevailing winds are south-west in the North Temperate Zone, and north-west in the South Temperate Zone.

*Periodical Winds.*—The most important of the periodical winds are the *monsoons* which prevail in the Indian Ocean, blowing, from April to October, from the south-west, north of the equator, and from the south-east in the southern hemisphere; and from October to April, from

the north-west, south of the equator, and from the north-east in the northern hemisphere. The monsoons are simply the north trade-winds drawn out of their course by the heated regions of Southern Asia.

Land and Sea Breezes are the most general of the periodical winds, and are most powerful in tropical countries. The land-breeze blows during the night, the sea-breeze during the day. During the day, the land gets more heated than the sea, the heated air over it ascends, and the cool air from the sea flows over on the land to supply its place; and as land cools more rapidly than water, during the night, the temperature of the land is lower than that of the sea, the air becomes heavier and denser, and flows over the sea as a land-breeze.

*Variable Winds.*—Within the tropics, the trade-winds and monsoons are the prevailing and permanent winds; but in higher latitudes the winds are variable, and depend on local or temporary causes, such as the nature of the soil, the configuration of the surface, &c. The most important of these are the following:

The Bise, a cold north-east wind on the northern coasts of the Mediterranean.

Cyclones, rotatory hurricanes between the equator and the tropics.

The East Winds of Britain, part of the Polar current, which in spring descends over Europe through Russia. They are dry and unhealthy.

The Etesian Winds, northerly winds blowing in summer over the Mediterranean to the heated deserts of North Africa.

The Harmattan, a name of the Simoom on the west coast of Africa.

The Mistral, a violent north-west wind, blowing down on the Gulf of Lions.

The Pampero, a violent dry west wind, sweeping over the *pampas* of Buenos Ayres.

The Puna Winds, prevailing for four months in the year in a high barren table-land in Peru called the Puna.

The Simoom, a hot, poisonous wind, occurring in most countries bordering on sandy deserts, as in Arabia, Egypt, &c.

The Sirocco, a hot, parching wind, from the Sahara, blowing over Sicily and the south of Italy.

The Solano, a hot south-east wind in the Spanish peninsula.

Tornadoes, whirlwinds or violent and destructive hurricanes frequent in tropical countries, and often accompanied with thunder, lightning, and rain.

Typhoons, violent hurricanes, which occur in the Chinese seas.

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## VIII. Rivers.

We have seen that the moisture which rises invisibly in the form of vapour from the land, and still more abundantly from the sea, ascends into the higher and colder regions of the atmosphere, to be condensed into clouds, and returned to the earth in the form of rain, hail, or snow. The mountain summits, rising into the higher regions of the atmosphere, arrest the clouds, and receive their waters, which then either trickle down the sides in the form of rills, or sink into the interior, whence they gush out again in springs and fountains. The rills

issuing from springs, and from surface-drainage, unite during their downward course with other streams, and form *rivulets*. These, after a further course, unite to form *rivers*, which, receiving fresh accessions in their course from *tributaries* or subordinate rivers, sweep onwards through ravines, and over precipices, or crawl with almost imperceptible motion across wide, flat plains, till they reach their lowest level in ocean, sea, or lake, to begin again the process of evaporation, condensation, falling to the earth, and flowing through the land.

The commencement of a river is called its *source;* the path along which it flows is termed its *course;* the hollow channel in which its waters are confined, its *bed;* the portions of land bordering it on each side are called its *banks*—the *right* and *left banks* being those to the right and left of a person looking in the direction in which the water flows. The termination of a river is called its *mouth*. Rivers in their course carry down with them large portions of soil torn from their banks, which either sink to the bottom of the channel, or, being borne along, accumulate at the river-mouth, and so form an obstruction which separates the stream into various arms or branches, each flowing to the sea. The deposit of soil inclosed by these arms is of a triangular shape, like the Greek letter D (Δ), and is hence called a *delta*, the name of the Greek letter. This occurs in the case of the Nile, Mississippi, Danube, Ganges, &c. A sudden change of level in the channel of a river produces a rush of water, which is called a *waterfall*. When the course of a river passes from a higher to a lower plateau (or broad flat extent of bed like the top of a table), and when the upper plateau is edged with rock, perpendicular or nearly so, the fall is termed a *cataract;* but when a slope is formed

by the wearing away of the edge of rock, the fall is called a *rapid*. The most remarkable cataract in the world is that of Niagara, in North America, where a broad deep river falls from a height of about 160 feet.

The whole extent of country drained by a river—that is, the whole of the slopes which contribute their waters to its formation—is called the *basin* of the river. The elevated ridge which separates one basin from another is called the *watershed*. From it the water is shed or sent off in opposite directions from its opposite sides. On the position of the watershed depends the direction of the rivers. When the watershed lies east and west, as is the case in Europe and Asia, the general direction of the rivers is from the one side to the north, and from the other to the south. When the watershed stretches from north to south, as in South America, the direction of the rivers is east and west. The length, size, and velocity of rivers are determined by the length and character of the slopes of the watershed. Thus the Andes in South America lie close to the west coast, consequently the streams to the west are but mountain-torrents; while those to the east have a gentle course of thousands of miles, and form some of the greatest rivers in the world.

The largest rivers in the world are the Amazon in South America, the Mississippi in North America, the Nile in Africa, the Yang-tze-Kiang in Asia, and the Volga in Europe.

Rivers are of the utmost importance to a country. They not only irrigate its surface, adding alike to the beauty of the landscape and the fertility of the soil, but they form the most available channel of internal communication. Most of the great seaports of the world are found at or near the mouths of rivers.

## IX. Lakes.

Lakes are generally most numerous in the northern latitudes and mountainous regions of the globe. They exhibit immense variety of size and character, and are usually divided into four classes:

1. Those which both receive streams and discharge them, and which may therefore be considered merely as expansions of rivers—this is by far the most numerous class.

2. Those which discharge streams, but receive no supply except from rains and subterranean sources.

3. Those small lakes which have neither apparent affluent nor outlet, and seem generally to be the craters of extinct volcanoes; and

4. The lakes which receive river waters, but apparently discharge none—for example, the Caspian Sea, Lake Aral, and the Dead Sea.

Lakes subserve important purposes in the economy of nature. They serve as reservoirs for the waters which rivers would too speedily carry away from the land; they are the tanks, as it were, in which the impurities of streams subside; they refresh and enliven the landscape; and as they all tend to silt up their own sites, these sites become in time tracts of fertile alluvium, and such has been the origin of some of our finest plains. They are also the scenes of extensive and varied vital operations. The plants which spring from their bottoms, or flourish by their margins, differ widely from true terrestrial and maritime vegetation; while the animals which people their waters exhibit peculiarities not less distinct and characteristic.

# SPELLING.

## THE MORE DIFFICULT POLYSYLLABIC WORDS IN COMMON USE.

| | | |
|---|---|---|
| acad'emy | al'legory | anal'ogous |
| accel'erate | alle'viate | animos'ity |
| accept'able | allu'vial | anni'hilate |
| accom'modate | alterca'tion | anom'alous |
| accu'mulate | ambas'sador | anon'ymous |
| ac'curacy | Amer'ican | antece'dent |
| ae'rial | a'miable | antip'athy |
| agree'able | amphib'ious | antip'odes |

| | | |
|---|---|---|
| anti'quity | artifi'cial | biog'raphy |
| anxi'ety | ascend'ency | catas'trophe |
| apol'ogy | Asiat'ic | celer'ity |
| apos'trophe | assid'uous | celes'tial |
| appre'ciate | associa'tion | cem'etery |
| apprehen'sion | auxil'iary | cer'emony |
| appren'ticeship | avari'cious | centrif'ugal |
| arith'metic | benefi'cial | chronol'ogy |

| | | |
|---|---|---|
| circumstan'tial | conscien'tious | correspond'ence |
| civilisa'tion | conspic'uous | corrupt'ible |
| coin'cidence | constitu'tion | defi'ciency |
| collo'quial | contig'uous | delete'rious |

| | | |
|---|---|---|
| combus'tible | con'tumely | delib'erate |
| compar'ative | convales'cent | del'icacy |
| concil'iate | co-op'erate | deliv'erance |
| confed'erate | corpo'real | depre'ciate |

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| | | |
|---|---|---|
| desola'tion | emer'gency | erro'neous |
| dil'atory | emol'ument | ethe'real |
| disappoint'ed | encyclope'dia | eulo'gium |
| dissat'isfied | energet'ic | Europe'an |
| ecclesias'tic | enthu'siasm | exag'gerate |
| effica'cious | epis'copal | ex'emplary |
| el'igible | eques'trian | exhil'arate |
| eman'cipate | equiv'ocal | extraor'dinary |

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| | | |
|---|---|---|
| extrav'agant | gen'erously | illit'erate |
| famil'iar | geog'raphy | illus'trious |
| Feb'ruary | hallelu'iah | imag'inary |
| feroc'ity | hered'itary | impet'uous |
| func'tionary | hon'orary | impla'cable |
| fundament'al | idol'ater | impos'sible |
| fune'real | ig'nominy | incen'diary |
| gen'erally | illeg'ible | incip'ient |

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| | | |
|---|---|---|
| indef'inite | ini'tiate | le'gendary |
| independ'ent | inscrut'able | levi'athan |
| indig'enous | insig'nia | libra'rian |
| indispens'able | integ'rity | licen'tiate |
| indus'trious | intel'ligible | lit'erary |
| infal'lible | interrup'tion | litig'ious |
| ingra'tiate | iras'cible | longev'ity |
| ini'quity | Jan'uary | loquac'ity |

machin'ery
magnan'imous
magnif'icent
mahog'any
mathemat'ics
medic'inal
mel'ancholy
mem'orable
menag'erie
merito'rious
mili'tia
miscella'neous
misdemean'our
munic'ipal
neces'sity
nego'tiate
noto'rious
obse'quious
ob'stinacy
offi'ciate
opportu'nity
or'dinary
panegyr'ic
par'alleled

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paro'chial
partic'ular
per'emptory
perpet'ual
phenom'enon
philan'thropy
philos'ophy
phraseol'ogy
politi'cian
precip'itous
predecess'or
prepar'atory
profi'ciency
promis'cuous
reassem'ble
rec'eptacle
recip'rocal
reconnoi'tre
reit'erate
reminis'cence
rep'ertory
resigna'tion
sagac'ity
sec'retary

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sed'entary
sequestra'tion
sever'ity
simulta'neous
solic'itude
solil'oquy
sol'itary
sponta'neous
substan'tiate
subterra'nean
supercil'ious
super'fluous
supe'rior
suscept'ible
systemat'ic
tem'porary
terres'trial
theol'ogy
topog'raphy
tranquil'lity
trian'gular
typog'raphy
unan'imous
unscru'pulous
vica'rious
vicis'situde
zool'ogy

## RULES FOR SPELLING.

I. **The Final Consonant is doubled** before an affix beginning with a vowel,

(1) *In words of one syllable ending in a single consonant preceded by a single vowel*—as:

beg beg-gar beg-geth beg-ged beg-ging

EXCEPTION—gas gas-eous

(2) *In words accented on the* last *syllable ending in a single consonant preceded by a single vowel*—as:

begin' begin'-ning begin'-ner

(3) *In words ending in* l *preceded by a single vowel*—as:

| | | | |
|---|---|---|---|
| counsel | model | libel | travel |
| counsel-led | model-led | libel-led | travel-led |

(4) *In the following words accented on the* first *syllable:*

| | | | | |
|---|---|---|---|---|
| bi'as | hum'bug | kid'nap | wool | wor'ship |
| bi'as-sed | hum'bug-ging | kid'nap-per | wool'-len | wor'ship-per |

II. **Final C, preceded by a vowel,** *assumes* k *at the end of nearly all monosyllables*—as:

check lick lock suck

III. *Words of more than one syllable* **ending in -ic and -iac,** *formerly spelled with* -ck, *have dropped the* k—as:

cubic music mimic maniac

EXCEPTION.—But *k* is assumed when an affix beginning with *e*, *i*, or *y* is added to the following words in *-ic*, in order to prevent an erroneous pronunciation:

| | | | | |
|---|---|---|---|---|
| colic | frolic | mimic | physic | traffic |
| colicky | frolicking | mimicking | physicking | trafficker |

IV. **Words ending in double l drop one l** *when compounded with other words, and before the affixes* -ful, -less, *and* -ly, *and sometimes before* -ness—as:

| | | | |
|---|---|---|---|
| al-though | al-most | al-ready | al-together |

| | | | |
|---|---|---|---|
| will | skill | full | dull |
| wil-ful | skil-less | ful-ly | dul-ness |

EXCEPTIONS.—Both *l*s are retained in the following:

| | | | |
|---|---|---|---|
| befall | farewell | smallness | stillness |
| befell | unwell | tallness | stillborn |
| downfall | undersell | illness | millstone |
| waterfall | downhill | shrillness | millrace |

V. **Final E is omitted,**

(1) *Before an affix beginning with a vowel*—as:

| | | | | |
|---|---|---|---|---|
| move | wise | love | grieve | stone |
| mov-able | wis-er | lov-ing | griev-ous | ston-y |

EXCEPTIONS.—1. Final *e*, when preceded by *c* or *g* soft, is retained (in order to preserve the soft sound) before the affixes *-able*, *-ous*, and sometimes before *-ing*—as:

| | | | |
|---|---|---|---|
| peace | change | courage | singe |
| peace-able | change-able | courage-ous | singe-ing |

2. Final *e* is retained before *-ing* in words ending in *ee*, *ie*, *ye*, and *oe*—as:

| | | | |
|---|---|---|---|
| see | hie | dye | shoe |
| see-ing | hie-ing | dye-ing | shoe-ing |

(2) *From the following words before an affix beginning with a consonant:*

| | | | |
|---|---|---|---|
| awe | aw-ful | abridge | abridg-ment |
| due | du-ly | argue | argu-ment |
| true | tru-ly | judge | judg-ment |
| whole | whol-ly | lodge | lodg-ment |

VI. **Final Y preceded by a consonant** *is changed into* i *before all affixes, except* -ing *and* -ish—as:

| | | | | |
|---|---|---|---|---|
| fancy | steady | holy | fancy | baby |
| fanci-ful | stead-ily | holi-er | fancy-ing | baby-ish |

EXCEPTIONS.

| | | | | |
|---|---|---|---|---|
| beauteous | bounteous | duteous | piteous | plenteous |
| beauty | bounty | duty | pity | plenty |

and the words dry-, sly-, shy-, *before* -ly *and* -ness.

VII. **Final Y preceded by a vowel** *is changed into* i *only in the following words:*

| | | | |
|---|---|---|---|
| daily | lain | paid | said |
| gaily | laid | unpaid | staid |

VIII. **The diphthong ei** *follows* c, *and* ie *any other consonant*—as:

| | | | |
|---|---|---|---|
| conceive | conceit | ceiling | grieve |
| deceive | deceit | chief | thieve |
| receive | receipt | field | relieve |

IX. **When a prefix ends in a consonant,** *it is often changed for euphony (good sound) into the first letter of the root, or into one agreeing with it in sound,* thus:

ad *and* fix *become* affix; con *and* press *become* compress.

(*Note.*—When a prefix ends with the same letter as that with which the root begins, both letters are retained, thus:

*mis-state*, not *mistate*; *dis-solve*, not *disolve*.)

# LIST OF THE MORE COMMON WORDS

## ALIKE IN PRONUNCIATION, BUT DIFFERING IN SPELLING AND MEANING.

an, Ann
be, bee
in, inn
but, butt
bad, bade
jam, jamb
so, sow
no, know
our, hour
new, knew
night, knight
not, knot
rap, wrap
reck, wreck
rest, wrest
ring, wring
right, wright
rite, write
hole, whole
rung, wrung

*c* AND *s*.

cell, sell
cede, seed
cession, session
cite, site

*s* AND *sc*.

sent, scent
seen, scene

*a* AS IN *all*.

all, awl
ball, bawl
aught, ought
claws, clause

*a* LONG.

made, maid
ale, ail
hale, hail
male, mail
pale, pail
sale, sail
tale, tail
mane, main
pane, pain
plane, plain
vane, vain
fare, fair
hare, hair
pare, pair
stare, stair
waste, waist
ate, ait
gate, gait
plate, plait
wave, waive
raze, raise
stake, steak
bare, bear
pare, pear
tare, tear
ware, wear
vale, veil
vane, vein
fain, feign
rain, reign
rain, rein
ait, eight
wait, weight
strait, straight
nay, neigh
way, weigh
pray, prey
air, ere
ere, heir
there, their

*e* SHORT.

led, lead
red, read
bred, bread
berry, bury

*e* LONG.

here, hear
flee, flea
see, sea
beech, beach
creek, creak
leek, leak
week, weak
heel, heal
peel, peal
steel, steal
seem, seam
teem, team
been, bean
deer, dear
feet, feat
meet, meat
need, knead
sees, seize
beer, bier
peer, pier
peace, piece
tear, tier
key, quay

*i* SHORT.

gild, guild
gilt, guilt
kill, kiln
him, hymn

*i* LONG.

mite, might
rite, right
write, wright
site, sight
slight, sleight
I, eye
die, dye
clime, climb
time, thyme
by, buy

*o* SHORT AS *u* SHORT.

sun, son
tun, ton
dun, done
nun, none
sum, some
dust, dost
won, one
ruff, rough

*o* LONG.

rode, road
ore, oar
boar, boar
sore, soar
pole, poll
sole, soul
fore, four
pore, pour
forth, fourth
throne, thrown
groan, grown
moan, mown
coarse, course
core, corps
close, clothes
sow, sew
yoke, yolk
nose, knows

*oo*.

fool, full
rood, rude
root, route
too, two
threw, through
wood, would
blew, blue
crews, cruise

*u* LONG.

dew, due
hew, hue
hew, Hugh
yew, you
yew, ewe

*ou*.

foul, fowl
bough, bow

# ROOTS AND DERIVATIVES.

## ANGLO-SAXON ROOTS.

**Æcer**, *a field*—acre, acreage.
**ær**, *before*—ere, erst, early.
**agan**, *to own*—own, owe, ought.
**an**, *one*—a, an, any, one, only.

**Bacan**, *to bake*—bake, batch, Baxter.
**bænc**, *a bench*—bank, bench, bankrupt.
**beacan**, *a sign*—beck, beckon, beacon.
**beatan**, *to beat*—bat, battle, batter, beat.
**bendan**, *to curve*—bend; connected with *bind*.
**beodan**, *to offer*—bid, beadle.
**beon**, *to be*—be, being, been.
**beorgan**, *to protect*—borough, burgh, harbour, barrow (a mound).
**beran**, *to bear*—bear, burden, barrow, birth, berth, bier, barm.
**bidan**, *to wait*—bide, abode.
**bindan**, *to bind*—bind, band, bond, bound, bundle.
**bitan**, *to bite*—bite, bit, bitter.
**blæc**, *pale*—bleach, bleak, black, blight.
**blæsan**, *to blow*—blister, bladder, blast, bluster, blaze.
**blessian**, *to consecrate*—bless, blessed, blessing.
**blithe**, *joyful*—blithe, bliss.
**brad**, *extended, broad*—broad, breadth, board.
**brecan**, *to break*—break, breach, breaker, breakfast, brake (a check).
**brucan**, *to use, to bear*—brook (endure), broker.
**bugan**, *to bend*—bow, bough, bay, bight, buxom, elbow.
**byrnan**, *to burn*—burn, burnish, brown, bronze, brand, brandy, brindled, brimstone, brunt.

**Ceapian**, *to buy*—cheap, chapman, chop (to buy), chaffer, Cheapside.
**cleafan**, *to split*—cleave, cleft, cliff, cloven, clover, clough.
**clifian**, *to adhere*—clay, cleave, clew, club.
**colian**, *to cool*—cool, cold, chill.
**cunnan**, *to know*—ken, con, cunning (skill).
**cyn**, *race*—kin, kind, kindred, king.

**Dæg**, *day*—day, dawn, daisy.
**dæl**, *a part*—deal, dole, ordeal.
**deman**, *to judge*—deem, doom, doomsday, dempster.
**dic**, *a trench*—ditch, dike, dig.
**don**, *to do*—do, deed, don, doff.

dragan, *to draw*—drag, draggle, draw, draught, draughts (game), dray, draft, dredge, drudge.
drig, *dry*—dry, drysalter, drug, drought.
drincan, *to drink*—drink, drench, drown.
drypan, *to drip*—drip, dribble, driblet, drivel, drop, droop.
dun, *a hill*—downs, dune, London, Dundee.
dyppan, *to dip*—dip, dive, deep, depth, dab, daub, dabble, dibble.

Eald, *old*—old, elder, alderman.
erian, *to plough*—ear (to plough), earth, earn.

Faran, *to go*—fare, farewell, ferry, ford, thoroughfare.
fedan, *to feed*—feed, food, fodder, forage (foderage), foray, father.
feoh, *cattle, money*—fee, fief, feoff, feud, feudalism, feu.
fian, *to hate*—fiend, feud, foe.
fleogan, *to fly*—flee, flight, flea, flake, flicker, flock, fowl, fledge; akin to flit, flutter, flow, float, flare, flurry, flag.
fleotan, *to float;* flowan, *to flow*—flow, flood, fleet, float, flotilla.

Gangan, *to go*—go, gang, gangway.
gast, *breath, spirit*—ghost, ghastly, aghast, gas.
gerefa, *a governor*—grieve (Scotch), reeve, sheriff, margrave.
glom, *gloom*—gloom, gleam, glimmer, gloamin (Scotch).
god, *God*—godfather, godsend, godspeed, good-bye, gospel, gossip.
grafan, *to carve, to dig*—graft, graff, grave, engrave, grove, groove, grub; connected with *carve.*
grindan, *to grate*—grind, grin, grit, groats, grout.
gripan, *to grasp;* grapian, *to grab*—grip, gripe, grab, grapple, grapnel, grasp, grope, grovel.

Habban, *to have*—have, haft, behave.
hal, *healthy, sound*—hale, heal, health, hail! holy, holiday, hallow, whole, wholesome, wassail.
ham, *a house*—home, hamlet, Oldham.
healdan, *to hold*—hold, behold, halt, halter, hilt, uphold, upholsterer.
hefan, *to lift up*—heave, heaven, heavy, heap.
hlaf, *bread*—loaf, lady, lord.
hus, *a house*—house, husband, huswife, hussy, hustings.

Lædan, *to lead*—lead, lode, loadstar, loadstone.
leogan, *to set down;* licgan, *to lay one's self down*—lie, lay, inlay, lair, lea, layer, ledge, ledger, law; connected with *low.*

Mængan, *to mix*—mingle, mongrel, among.
magan, *to be able*—may, might, main, dismay.
mere, *a lake*—Windermere.
mona, *the moon*—moon, month, Monday.

Næse, *the nose*—nose, nostril, nozzle, Naze, ness, Sheerness.

Pick, *a point*—pick, picket, peak, beak, pike, peck, poke (to thrust.)

Reflan, *to rob*—reave, bereave, rove; connected with *rob*.

Scafan, *to scrape*—shave, shaft.
scale, *a shell*—scale, scalp, scallop, shell, skull.
sceofan, *to shove*—shove, shovel, shuffle, scuffle.
sceotan, *to shoot*—shoot, shot, shutter, shuttle, sheet.
scran, *to cut, to divide*—shire, shore, sheriff, share, shear, shears, sheer (to turn aside), shred; connected with *scar, score*.
screopan, *to scrape*—scrape, scrap.
snican, *to creep*—sneak, snug, snake, snail.
stician, *to stick*—stick, stitch, stake, stock, stocking, stockade.
stigan, *to ascend*—stair, story, sty (a tumour), stile, stirrup.
stow, *a place*—stow, bestow, Chepstow.

Thirlian, *to make a hole*—drill, thrill, nostril.
twegen, *two*—twain, between.
twi, *two*—twilight, twin, twine, twig, twill, twist.

Weardian, *to defend*—ward, warden, wardrobe, guard, guardian.
wiht, *a thing*—aught, naught, whit, wight.
witan, *to know*—wit, wistful, wise, wisdom, wiseacre, wizard.
wringan, *to wring*—wrangle, wrench, wring, wrong, wrinkle.
writhan, *to twist*—writhe, wreath, wry, wrath.

## LATIN ROOTS.

Acer, *sharp*—acid, acrid, acrimony, acerbity, acumen, acute.
ædes, *a house*—edifice, edify, edification, Edile.
æquus, *equal*—equality, equivalent, equator, adequate, equity, iniquity.
ævum, *an age*—coeval, primeval, longevity.
ager, agri, *a field*—agriculture, agrarian, peregrinate.
ago, actum, *to put in motion, to do*—agent, agile, agitate, navigate, act, enact, transact, prodigal.
albus, *white*—alb, album, albumen, alburnum.
alius, *other*—alias, alibi, alien, alienate.
alo, *to nourish*—aliment, alimony, alumnus, coalesce, coalition.
alter, *another*—alter, altercation, adulterate, alternate, subaltern.
altus, *high*—altar, altitude, exalt.
ambulo, ambulatum, *to walk*—ambulance, perambulate, somnambulist.
amo, amatum, *to love*—amiable, amorous, amicable, amity, enmity, enemy, inimical.
ango, anxi, *to press together, to vex*—anger, anguish, anxiety.
anima, *air, breath, life*—animal, animalcule, animate.
animus, *the soul, the mind*—animosity, animadvert, equanimity, magnanimous, unanimous.
annus, *the year*—annual, annuity, annals, anniversary, biennial, centenary, millennium, superannuate.

**ante**, *before;* **antiquus**, *ancient*—antic, antique, antiquity, ancient.
**aperio, apertum**, *to open*—aperient, aperture, April.
**appello**, *to call*—appeal, appellation, appellative.
**aqua**, *water*—aqueous, aquatic, aquarium, aqueduct.
**arceo**, *to drive away*—coerce, coercion, exercise.
**arma**, *weapons*—armour, armada, armament, armistice, disarm.
**ars, artis**, *art*—artist, artisan, artificial, artful.
**audio, auditum**, *to hear*—audible, audience, audit, obey, obeisance.
**augeo, auctum**, *to increase*—augment, auction, author, auxiliary, autumn (the season of increase).
**auris**, *the ear*—aurist, auricle, auricular.
**avarus**, *greedy*—avarice, avaricious.
**avis**, *a bird*—aviary, auspices, inaugurate.

**Barba**, *a beard*—barb, barber, barbel.
**barbarus**, *foreign*—barbarous, barbarian, barbarity.
**beatus**, *blessed*—beatify, beatitude.
**bellum**, *war*—belligerent, bellicose, rebel, rebellious.
**bene**, *well*—benefit, benevolent, benefactor, benison.
**bibo**, *to drink*—bibber, bibulous, imbibe.
**bis, bi**, *twice*—biscuit, biped, bisect.
**brevis**, *short*—brief, brevity, abbreviate, abridge.

**Cado, casum**, *to fall*—cadence, case, casual, cascade, accident, occasion.
**cædo, cæsum**, *to cut, to kill*—circumcise, concise, homicide, parricide.
**candeo**, *to be white, to shine*—candid, candour, candidate, incandescent, incense, candle.
**cano**, *to sing;* **carmen**, *a song*—chant, canto, canticle, incantation, precentor, cant, charm.
**capio, captum**, *to take*—capable, captive, capture, accept, except, conceive, receive, receptacle, receipt, recipe.
**caput, capitis**, *the head*—capital, cape, capitulate, captain, chapter, chief, chieftain, decapitate.
**carbo**, *coal*—carbon, carbonic, carboniferous, char, charcoal.
**caro, carnis**, *flesh*—carnal, carnage, carnival, carnivorous, carrion, incarnate, incarnation.
**carus**, *dear*—caress, charity, cherish.
**causa**, *a cause*—cause, causation, accuse, excuse, recusant.
**cavus**, *hollow*—cave, cavity, cavern, concave, excavate.
**cedo, cessum**, *to give up, to go*—cede, cession, cessation, accede, precede, proceed, succeed, access, recess.
**celer**, *swift*—celerity, accelerate.
**censeo, censum**, *to weigh, to judge, to blame*—censor, censorious, censure, census.
**centum**, *a hundred*—cent, century, centurion, centenary, centipede.
**cerno, cretum**, *to see, judge, determine*—certain, certify, concern, discern, discreet, secret, secrete.
**charta**, *paper*—chart, charter, card, carte, cartoon, cartridge.
**cingo, cinctum**, *to gird*—cincture, precinct, succinct.
**circus**, *a circle*—circus, circle, circular, circuit, circulate.
**cito, citatum**, *to call, to stir up*—cite, excite, recite, resuscitate, solicit.
**civis**, *a citizen*—civic, civil, civilian, civility, civilise.

clamo, clamatum, *to call out*—clamant, claim, claimant, clamour, exclaim, proclamation.
claudo, clausum, *to shut*—clause, close, closet, cloister, conclude, recluse, seclusion.
clino, *to bend*—decline, incline, declension, inclination.
colo, cultum, *to till*—cultivate, culture, agriculture, colony.
coquo, coctum, *to cook*—cook, concoct, decoction.
cor, cordis, *the heart*—cordial, concord, discord.
cornu, *a horn*—corn (on the toe), corned, cornet, unicorn, cornucopia.
corona, *a crown*—coronet, coronation, corolla, coroner, colonel.
corpus, corporis, *a body*—corps, corpse, corporal, corporeal, corpulent, corporation, incorporate.
credo, creditum, *to trust, to believe*—credit, creditor, credulous, credence, creed, incredible.
creo, creatum, *to make*—create, creator, creature.
cresco, cretum, *to grow*—crescent, excrescence, increase, decrease.
crimen, criminis, *a crime*—criminal, criminate, discriminate.
crux, crucis, *a cross*—crucifix, crucify, crucible, crusade, excruciating.
cubo or cumbo, cubitum, *to lie down*—succumb, recumbent, incumbent, incubus, incubation.
culpa, *a fault*—culpable, culprit, exculpate.
cumulo, *to heap up*—cumulative, accumulate.
cura, *care*—cure, curate, secure, accurate.
curro, cursum, *to run*—current, curricle, course, courier, incur, occur, succour, excursion.
cutis, *the skin*—cuticle, cutaneous.

Damnum, *hurt, loss*—damnation, condemnation, damage, indemnity.
debeo, debitum, *to owe*—debit, debt, debtor, debenture.
decem, *ten*—decimal, decimate, decennial, December.
decens, decentis, *becoming*—decent, decorum, decorous, decorate.
deleo, deletum, *to blot out*—delete, deleterious, indelible.
dens, dentis, *a tooth*—dental, dentist, dentifrice, indentation, trident.
densus, *thick*—dense, density, condense.
deus, *a god*—deity, deify, deist, divine.
dexter, *right-handed, skilful*—dexterity, dexterous, ambidexter.
dico, dictum, dicatum, *to speak, to say*—diction, dictate, contradict, predict, dictionary, abdicate, predicate.
dies, *a day*—dial, diary, diurnal, diet, meridian.
dignus, *worthy*—dignity, dignify, indignant, deign, disdain.
disco, *to learn*—disciple, discipline, disciplinarian.
do, datum, *to give*—date, data, dative, add, edit, tradition.
doceo, doctum, *to shew, to teach*—doctor, doctrine, docile, document.
doleo, *to grieve*—doleful, dolorous, condole.
dominus, *a lord*—dominate, domineer, domain, dominion, predominate.
domus, *a house*—dome, domicile, domestic; dam, dame (through Fr.)
dormio, *to sleep*—dormant, dormitory, dormouse.
dos, dotis, *a gift*—dotal, dower, dowager, endow.
duco, ductum, *to lead, draw*—educate, ductile, dux, duke, ducal, ducat, abduct, duct, aqueduct, viaduct, conduit, conduce, educe, induce.
dulcis, *sweet*—dulcet, dulcimer, indulge.

**duo**, *two*—**dual**, **duel**, **duet**, **duplicate**, **double**.
**durus**, *hard*—**durable**, **duration**, **endure**, **obdurate**.

**Emo**, **emptum**, *to buy*—**redeem**, **exempt**, **peremptory**.
**ens**, **entis**, *being*; **esse**, *to be*—**absent**, **present**, **essence**.
**eo**, **itum**, *to go*—**exit**, **transit**, **circuit**, **perish**, **ambitious**, **itinerant**.
**equus**, *a horse*—**equine**, **equestrian**, **equerry**.
**erro**, **erratum**, *to wander*—**err**, **errant**, **erratic**, **aberration**.
**experior**, *to try*—**experiment**, **experience**, **expert**.

**Facio**, **factum**, *to do*, *to make*—**fact**, **faction**, **factor**, **factory**, **benefactor**, **manufacture**, **effect**, **perfect**, **defective**, **efficient**, **sufficient**, **satisfy**, **rectify**, **artifice**.
**fallo**, **falsum**, *to deceive*—**false**, **fallible**, **fallacious**.
**fendo**, **fensum**, *to ward off*—**fend**, **fender**, **defend**, **fence**, **offensive**.
**fero**, *to bear*—**fertile**, **confer**, **differ**, **circumference**.
**ferveo**, *to boil*—**fervent**, **fervid**, **fervour**, **effervesce**, **ferment**.
**festum**, *a holiday*—**feast**, **festal**, **festive**, **festivity**.
**fido**, *to trust*—**fidelity**, **confide**, **perfidy**, **affiance**, **faith**, **faithful**.
**filius**, *son*; **filia**, *daughter*—**filial**, **affiliate**.
**fingo**, **fictum**, *to form*, *to feign*—**figure**, **effigy**, **feign**, **fiction**, **fictitious**.
**finis**, *end*—**finish**, **final**, **finite**, **confine**, **define**.
**firmus**, *strong*, *firm*—**affirm**, **confirm**, **infirmary**, **affirmative**, **firmament**.
**flecto**, **flexum**, *to bend*—**flexible**, **reflect**, **genuflexion**.
**fligo**, **flictum**, *to strike down*—**affliction**, **conflict**, **inflict**, **profligate**.
**flos**, **floris**, *a flower*—**floral**, **florist**, **florid**, **flour**, **flourish**, **efflorescent**.
**fluo**, **fluxum**, **fluctum**, *to flow*—**fluid**, **fluency**, **affluent**, **confluence**, **influence**, **flux**, **fluxion**, **fluctuate**, **superfluous**.
**folium**, *a leaf*—**foil**, **foliage**, **folio**, **trefoil**.
**forma**, *shape*—**form**, **formal**, **formula**, **uniform**, **perform**, **reform**.
**fors**, **fortis**, *chance*—**fortune**, **fortunate**, **fortuitous**.
**fortis**, *strong*—**fort**, **fortress**, **fortify**, **comfort**.
**frango**, **fractum**, *to break*—**fragile**, **frail**, **fragment**, **fraction**, **fracture**, **refraction**, **infringe**.

**Globus**, **glomus**, *a ball*; **gleba**, *a clod*—**globe**, **glebe**, **globular**, **conglobulate**, **conglomerate**; connected with *clod*, *club*, *clew*, *clue*.
**gradior**, **gressus**, *to go*; **gradus**, *a step*—**grade**, **gradient**, **gradual**, **graduate**, **degrade**, **retrograde**, **ingress**, **congress**, **progress**, **transgress**.
**grandis**, *great*—**grand**, **grandeur**, **grandee**, **grandiloquent**, **aggrandise**.
**gratia**, *favour*—**grateful**, **gratify**, **gratitude**, **gratuity**, **congratulate**, **gratis**, **agree**, **grace**.
**gravis**, *heavy*—**grave**, **gravity**, **gravitate**, **aggravate**, **grief**, **grieve**.
**grex**, **gregis**, *a flock*—**gregarious**, **aggregate**, **congregation**.
**gustus**, *taste*—**gust**, **gusto**, **disgust**.

**Habeo**, **habitum**, *to have*, *to dwell*—**habit**, **inhabitant**, **habitation**, **habitual**, **prohibit**, **exhibition**.
**haereo**, **haesum**, *to stick*—**adhere**, **cohere**, **cohesion**, **hesitate**.
**haurio**, **haustum**, *to draw*—**exhaust**, **inexhaustible**.
**herba**, *an herb*—**herbal**, **herbaceous**, **herbivorous**, **herbarium**.

**heres**, *an heir*—hereditary, inherit, inheritance.
**homo**, *a man*—homage, homicide, human, humane, humanity.
**honor**, *honour*—honorable, honorary, honest, honesty.
**horreo**, *to stand on end, to shudder*—horrible, horrid, horror, abhor.
**hospes, hospitis**, *a guest*—host, hospital, hospitality, hospitable, hospice, hostler, hotel.
**hostis**, *an enemy*—host, hostile, hostility.
**humeo**, *to be moist*—humid, humidity, humour, humorous.

**Idem**, *the same*—identify, identity, identical.
**ignis**, *fire*—ignite, ignition, igneous.
**imitor, imitatus**, *to copy;* **imago, imaginis**, *an image*—imitate, inimitable, imagery, imagine, imagination.
**impero, imperatum**, *to command*—empire, emperor, imperial, imperative, imperious.
**inferus**, *beneath*—inferior, infernal.
**insula**, *an island*—insular, insulate, peninsula, isle, isolate.
**ira**, *anger*—ire, irate, irascible.
**iterum**, *again*—iteration, reiterate.

**Jaceo**, *to lie*—adjacent, circumjacent.
**jacio, jactum**, *to throw*—abject, inject, reject, object, subject, projectile.
**judex, judicis**, *a judge*—judge, judgment, judicial, adjudicate.
**jugum**, *a yoke*—conjugate, subjugate, conjugal.
**jungo, junctum**, *to join*—join, joint, jointure, juncture, conjunction.
**jus, juris**, *right, law;* **justus**, *lawful*—justice, justiciary, jurisdiction.
**juvenis**, *young*—juvenile, junior.
**juvo, jutum**, *to help*—adjutant, coadjutor.

**Labor, lapsus**, *to slide, to fall*—lapse, elapse, collapse, relapse.
**labor**, *work*—labour, laboratory, elaborate.
**lac, lactis**, *milk*—lacteal, lactic, lettuce.
**laedo, laesum**, *to strike, to dash*—elide, collision.
**lapis, lapidis**, *a stone*—lapidary, dilapidate.
**latus**, *borne*—collate, relate, translate, dilatory, delay.
**latus, lateris**, *a side*—lateral, collateral, equilateral, quadrilateral.
**laus, laudis**, *praise*—laud, laudable, laudatory.
**lavo, lavatum, lotum**, *to wash*—lave, lava, lavatory, lavender, laundry, lotion.
**laxus**, *loose*—lax, laxative, relax, relaxation, prolix.
**lego, lexi, lectum**, *to gather, to read, to choose*—legible, eligible, legend, lecture, lesson, collect, select, college, colleague, negligent.
**lego, legatum**, *to send, to bequeath*—legate, delegate, legacy.
**lex, legis**, *a law*—legal, legitimate, legislate.
**liber**, *free*—liberal, liberate, liberty, libertine, deliver.
**liber**, *bark, a book*—library, librarian, libel.
**libra**, *a pound, a balance*—librate, deliberate, equilibrium, level.
**licet, licitum**, *it is lawful*—licence, licentiate, licentious, illicit.
**ligo, ligatum**, *to bind*—ligament, ligature, league, oblige, religion.
**linea**, *a line*—lineal, linear, lineage, lineament, rectilinear.
**lingua**, *the tongue*—lingual, linguist, language.

**linquo, lictum,** *to leave*—delinquent, relinquish, relic, relict.
**liqueo,** *to be fluid*—liquid, liquor, liquefy, liquescent.
**litera,** *a letter*—literal, literary, literature, alliteration, illiterate.
**locus,** *a place*—local, locality, locate, dislocate, locomotion.
**longus,** *long*—longitude, longevity, oblong, prolong, elongate.
**loquor, locutus,** *to speak*—loquacity, loquacious, eloquent, elocution, colloquial, soliloquy, ventriloquist.
**ludo, lusum,** *to play*—delude, interlude, delusion, illusive, ludicrous.
**luna,** *the moon*—lunar, lunacy, lunatic, sublunary.
**luo, lutum,** *to wash*—dilute, ablution, alluvial, deluge, antediluvian.
**lux, lucis,** *light*—lucid, elucidate.

**Magister,** *a master*—magisterial, magistrate, master.
**magnus,** *great;* major, *greater;* **maximus,** *greatest*—magnify, magnitude, magnanimous, magnificent; majority, majesty; maximum.
**malus,** *bad;* male, *badly*—malady, malice, maltreat, malevolent.
**mando,** *to give into one's hand, to command*—mandate, command, demand, commend, commodore.
**maneo, mansum,** *to stay*—manse, mansion, remain, remnant, permanent.
**manus,** *the hand*—manual, manacle, manuscript, manufacture, maintain, maintenance.
**mare,** *the sea*—marine, maritime, submarine, mermaid.
**Mars, Martis,** *the god of war*—martial, March (the month).
**mas, maris,** *a male*—masculine, marry, marriage, marital.
**mater, matris,** *a mother*—maternal, matron, matriculate.
**maturus,** *ripe*—mature, maturity, premature.
**medeor,** *to heal*—medical, medicine, remedy.
**medius,** *middle*—medium, medial, intermediate, Mediterranean, mean.
**memor,** *mindful*—memory, memorable, memoir, memorandum, memorial, commemorate, remember.
**mens, mentis,** *the mind*—mental, comment, vehemence.
**mereo, meritum,** *to deserve*—merit, meritorious, demerit.
**mergo, mersum,** *to dip*—merge, emerge, emergency, submerge, immerse.
**metior, mensus,** *to measure*—mete, metre, metric, immense, commensurate, measurement.
**merx, mercis,** *merchandise*—merchant, mercer, commercial.
**migro, migratum,** *to remove*—migratory, emigrate, emigrant, immigrate, immigrant.
**miles, militis,** *a soldier*—military, militant, militia, militate.
**mille,** *a thousand*—mile (a thousand paces), million, millennium, milfoil.
**minister,** *a helper*—ministry, ministration, administer, minstrel.
**minor, minus,** *less*—minor, minority, minute, diminutive, diminish.
**mirus,** *wonderful*—miracle, miraculous, admire, marvellous.
**misceo, mixtum,** *to mix*—miscellany, promiscuous, mixture.
**miser,** *wretched*—miser, misery, miserable, commiserate.
**mitto, missum,** *to send*—admit, commit, mission, missionary, missile, promise, dismiss, dismission, promissory.
**modus,** *measure, manner*—mode, mood, model, modify, modulate, commodious, commodity.
**moneo, monitum,** *to remind*—monitor, monument, admonition, money (from *moneta,* the reminding one, a name of the goddess Juno),

**mons, montis,** *a mountain*—mount, mountain, mountainous, surmount, dismount, promontory.
**monstro,** *to shew*—monster, demonstrate, remonstrate, muster.
**mors, mortis,** *death*—mortal, mortality, mortify, mortgage, moribund.
**mos, moris,** *manner*—moral, morality, demoralise.
**moveo, motum,** *to move*—move, movement, mob, motion, commotion, locomotive, moment, momentum.
**multus,** *many*—multiple, multiply, multiform, multitude.
**munio, munitum,** *to wall, to fortify*—munition, ammunition.
**munus, muneris,** *service, office, gift*—munificent, remunerate, municipal, municipality, immunity.
**murus,** *a wall*—mural, immure.
**muto, mutatum,** *to change*—mutual, mutation, immutable, commute, mutiny.

**Narro, narratum,** *to tell*—narrate, narrative.
**nascor, natus,** *to be born*—nascent, natal, nation, native, nature, natural, cognate, innate.
**navis,** *a ship*—navy, naval, navigate, navigable, navigation.
**necto, nexum,** *to bind*—connect, annex, annexation.
**nego, -atum,** *to say no, to deny*—negative, negation, abnegation, renegade, deny, denial.
**neuter,** *neither*—neuter, neutral, neutrality.
**noceo,** *to hurt;* **noxius,** *hurtful*—innocent, innocuous, noxious, obnoxious, nuisance (through Fr.).
**nomen, nominis,** *a name*—nominal, nominate, nomenclature, denominate, noun, ignominy.
**norma,** *a rule*—normal, abnormal, enormous.
**nosco, notum,** *to know*—note, notable, notary, notice, notify, denote, noble, ignoble, recognise.
**novem,** *nine;* **nonus,** *ninth*—November, nonagon, nonagenarian.
**novus,** *new*—novel, novice, innovation, renovate.
**nox, noctis,** *night*—nocturnal, equinox, equinoctial.
**nubo, nuptum,** *to veil, to marry*—connubial, nuptial.
**numerus,** *a number*—numeral, numeration, numerous, enumerate, innumerable, supernumerary.
**nuntio, nuntiatum,** *to tell*—nuncio, announce, denounce, pronounce, renunciation.
**nutrio, nutritum,** *to nourish*—nutriment, nutrition, nurture, nurse.

**Octo,** *eight*—October, octave, octavo, octagon.
**oculus,** *the eye*—ocular, oculist, binocular, inoculate.
**omen,** *a sign*—omen, ominous, abominable, abominate.
**omnis,** *all*—omnibus, omnipotent, omnipresent, omniscient.
**opus, operis,** *a work*—opera, operate, operative, co-operative.
**orbis,** *a circle*—orb, orbit, exorbitant.
**ordo, ordinis,** *order, rank*—order, ordain, ordinal, ordinary, ordinance, ordnance, inordinate, subordinate.
**orior,** *to rise;* **origo,** *beginning*—orient, origin, aborigines.
**orno,** *to deck*—ornate, ornament, ornamental, adorn.
**os, oris,** *the mouth;* **oro,** *to speak*—oral, oracle, orator, orifice, adore, peroration, inexorable.

os, ossis, *a bone*—osseous, ossify, ossifrage, osprey.
ovum, *an egg*—oval, oviform, oviparous.

Pagus, *a country district*—pagan, peasant.
pando, pansum, passum, *to spread*—expand, expanse, compass, pace.
pango, pactum, *to bind, to fix*—pack, package, pact, paction, compact, impinge, impact, despatch.
panis, *bread*—pannier, pantry, companion, accompany.
par, *equal*—parity, peer, compeer, disparage.
pareo, *to appear*—appear, apparent, apparition, transparent.
pario, *to bring forth*—parent, oviparous, viviparous.
paro, paratum, *to make ready*—prepare, repair, apparel, apparatus, separate, separation, preparation.
pars, partis, *a part*—part, party, partial, particle, particular, participle, parse, compartment.
pasco, pastum, *to feed*—pastor, pasture, pasturage, repast.
pater, *a father;* patria, *fatherland*—paternal, patrimony, patrician, patriot, patron, expatriate.
patior, passus, *to bear, to suffer*—patient, passive, passion, compassion.
pauper, *poor*—pauper, poor, poverty, impoverish.
pax, pacis, *peace*—peace, peaceful, pacify, pacific.
pecco, *to sin*—peccant, peccable, peccadillo.
pectus, pectoris, *the breast*—pectoral, expectoration, parapet.
pecus, *cattle;* peculium, *private property;* pecunia, *money*—peculiar, peculation, pecuniary, impecuniosity.
pello, *to call*—appeal, appellation, repeal.
pello, pulsum, *to drive*—compel, impel, propel, pulse, impulse, repulse.
pendeo, pensum, *to hang*—pendant, pendulum, append, depend, dependency, pensile, suspense.
pendo, pensum, *to weigh, to pay*—expend, expense, expensive, pensive, recompense.
pene, *almost*—peninsula, penultimate.
penetro, *to thrust into the inside of*—penetrate, impenetrable.
pes, pedis, *a foot*—pedal, pedestal, impede, expedient, biped.
pestis, *a plague*—pest, pestilence, pestiferous.
peto, petitum, *to seek*—petition, appetite, compete, repeat, centripetal.
pingo, pictum, *to paint*—picture, pigment, depict.
piscis, *a fish*—piscatory, expiscate.
pius, *dutiful*—pious, piety, impious, pity.
placeo, *to please*—placid, implacable, complacent, complaisant, pleasure.
planus, *level*—plane, plain, plan, explain, esplanade, piano.
plaudo, plausum, *to clap, to praise*—plaudit, plausible, applause, explode, explosion.
plebs, *the common people*—plebeian, plebiscite.
pleo, pletum, *to fill;* plenus, *full*—complete, complement, supply, supplement, plenitude, plenary, replenish.
plico, plicatum, *to fold;* plexus, *twisted*—ply, pliable, apply, multiply, complicate, complex, simple, triple, treble.
plus, pluris, *more*—nonplus, surplus, plural,
poena, *fine, punishment*—penal, penalty, penitent, penance, repent.
pondus, ponderis, *a weight*—ponder, ponderous, preponderate, pound.

**pono, positum,** *to place*—depone, postpone, compose, compositor, deposit, proposition.
**pons, pontis,** *a bridge*—pontage, pontoon.
**populus,** *a people*—popular, populous, public, publish.
**porta,** *a door* or *gate*—porter, portal, portico, porch, porthole, portcullis.
**porto,** *to carry*—porter (one who carries), porter (a liquor so called because first used by the London *porters*), portable, portfolio, portmanteau, import, export, transport, deportment.
**posse,** *to be able;* **potens, potentis,** *able, powerful*—possible, possess, potent, impotent, potentate, omnipotent.
**poto, potatum,** *to drink*—potion, potation, poison.
**prehendo, prehensum,** *to grasp, to seize*—apprehend, comprehend, prison, surprise, reprisal, prize.
**premo, pressum,** *to press*—impress, oppress, suppress, reprimand.
**pretium,** *price*—precious, appreciate, depreciate, appraise.
**primus,** *first*—prime, primer, primary, primeval, primrose, primate, premier, prince, principle, principal.
**probo, probatum,** *to prove;* **probus,** *proved, good*—probe, probable, probity, prove, improve, proof, reprobate.
**prope,** *near*—propinquity, propitious, propitiate.
**proprius,** *one's own*—proper, property, proprietor, appropriate.
**proximus,** *nearest, next*—proximity, approximate.
**pugno,** *to fight*—pugnacious, pugnacity, impugn, repugnant.
**pungo, punctum,** *to prick*—puncture, punctuate, punctuation, punch, pungent, pungency, expunge.
**purgo,** *to cleanse;* **purus,** *clean*—purge, purgative, purgatory, expurgate, pure, purify, Puritan.
**puter,** *rotten*—putrid, putrescent, putrefaction.
**puto, putatum,** *to clean, settle, reckon*—amputate, compute, dispute, reputation.

**Quæro, quæsitum,** *to ask*—query, quest, question, inquire, require, requisite, requisition.
**quatio, quassum,** *to shake*—concuss, discuss, percussion.
**quatuor,** *four;* **quartus,** *fourth;* **quadra,** *a square*—quart, quarter, quadrant, quadrangle, quadruped, quadrille, square, quire (of paper).
**quies, quietis,** *rest*—quiet, quietude, quiescent, acquiesce, tranquil, tranquillity, requiem.
**quinque,** *five;* **quintus,** *fifth*—quinquennial, quintessence, quintuple.

**Radius,** *a ray*—radius, radiate, radiant, ray.
**radix, radicis,** *a root*—radish, radical, eradicate.
**rado, rasum,** *to scrape*—abrade, erase, razor.
**rapio, raptum,** *to seize*—rapture, rapine, rapacity, rapid, ravage, ravish, surreptitious.
**ratio,** *reckoning, reason*—rate, ratio, rational, reason, reasonable.
**rego, rectum,** *to rule;* **rex, regis,** *a king;* **rectus,** *straight*—regent, regnant, reign, regular, regulate, regime, regimen, regiment, rector, rectitude, rectify, correct, direct, rectangle, regal, regicide, royal, realm, rule.
**repo, reptum,** *to creep*—reptile.
**res,** *a thing*—real, realise, reality,

**rete**, *a net*—retina, reticule, reticulate.
**rideo, risum**, *to laugh*—deride, derision, ridicule, ridiculous, risible.
**rivus**, *a river*; **ripa**, *a river-bank*—river, rivulet, rival, derive, derivative.
**robur, roboris**, *oak, strength*—robust, corroborate.
**rodo, rosum**, *to gnaw*—rodent, corrode, corrosion.
**rogo, rogatum**, *to ask*—abrogate, arrogate, prorogue, prorogation.
**rota**, *a wheel*—rotation, rotatory, rotundity.
**ruber, rubris**, *red*—ruby, rubicund, rubric.
**rudis**, *rude*—rude, rudiments, erudite.
**rumpo, ruptum**, *to break*—rupture, abrupt, corrupt, eruption, bankrupt.
**rus, ruris**, *the country*—rural, rustic.

**Sacer, sacris**, *sacred*—sacred, sacrament, sacrifice, sacrilege, consecrate, desecrate, sacristan (*contracted*, sexton).
**sal**, *salt*—saline, salad, sauce, salary (from the money given to the Roman soldiers for *salt*).
**salio, saltum**, *to leap*—sally, salient, salmon, assail, assault, saltation, exult, insult.
**salus, salutis**, *safety, health*; **salvus**, *safe*—salute, salutation, salubrious, salvage, salvation, save, saviour, safe, safety.
**sanctus**, *holy*—sanction, sanctify, sanctimonious, sanctuary, saint.
**sanguis, sanguinis**, *blood*—sanguine, sanguinary, sanguineous, consanguinity.
**sanus**, *sound*—sane, sanatorium, insanity.
**sapio**, *to taste, to know*—sapient, insipid, savour.
**satis**, *enough*—sate, satisfy, satiate, saturate.
**scando, scansum**, *to climb*—scan, scansorial, ascend, descend.
**scindo, scissum**, *to cut*—scissors, abscis, rescind.
**scio**, *to know*; **sciens, scientis**, *knowing*—science, scientific, conscience, omniscience.
**scribo, scriptum**, *to write*—scribe, scribble, describe, description, scripture, scrip, scrivener.
**seco, sectum**, *to cut*—sect, section, secant, segment, bisect, insect.
**sedeo, sessum**, *to sit*—sedentary, sedate, sediment, preside, subside, session, assiduous, subsidy.
**semen, seminis**, *seed*—seminary, disseminate, dissemination.
**semi**, *half*—semicircle, semicolon.
**senex, senis**, *old*; **senior**, *elder*—senate, senile, senior, sir, sire.
**sentio, sensum**, *to feel, to think*—sentient, sense, scent, sensual, sensuous, sensible, sensation, sensitive, sentence, sentiment.
**septem**, *seven*—septennial, September (orig. the *seventh* month of the year), Septuagint (the Greek version of the Old Testament, said to have been made by *seventy* translators).
**sequor, secutum**, *to follow*—sequence, sequel, consequence, subsequent, persecute, prosecute.
**sero, sertum**, *to join*—series, serial, assert, insert, dissertation.
**servio, servitum**, *to obey, to serve*—serve, servant, sergeant, service, servitor, servitude, servile, subservient.
**servo**, *to keep*—conserve, preserve, conservative, reservoir.
**sex**, *six*—sexagenarian, bissextile, sextant.
**signum**, *a sign*—sign, signal, signify, signature, signet, resign, insignia.
**similis**, *like, same*—similar, similitude, resemblance, assimilation.

**simul**, *at the same time*—simultaneous, assemblage.
**sisto**, *to stand*—assist, consist, persist, irresistible.
**socius**, *a companion*—social, sociable, society, association.
**sol**, *the sun*—solar, solstice, parasol.
**solor**, *to comfort*—solace, console, inconsolable, consolation.
**solus**, *alone*—sole, solo, solitary, solitude, soliloquy, desolate.
**solvo, solutum**, *to loosen*—solve, solvent, soluble, solution, resolve, resolution.
**somnus**, *sleep*—somniferous, somnambulist.
**sonus**, *sound*—sound, sonorous, consonant, unison.
**spargo, sparsum**, *to scatter*—sparse, disperse, intersperse.
**specio, spectum**, *to see, to look*—species, special, specify, specimen, inspect, spectacle, spectator, circumspect, perspicuity.
**spero**, *to look for, to hope*—despair, desperation, desperado.
**spiro**, *to breathe*—spirit, spiritual, spirituous, spiracle, conspire, inspire, transpire, aspirate, respiration.
**splendeo**, *to shine*—splendid, splendour, resplendent.
**spolium**, *spoil*—spoliation, despoil.
**spondeo, sponsum**, *to promise*—respond, correspond, sponsor, spouse.
**stella**, *a star*—stellar, constellation.
**sterno, stratum**, *to lay flat*—consternation, stratum, stratify, prostrate.
**stinguo, stinctum**, *to prick, to quench*—distinguish, extinguish, distinct, extinct.
**sto, statum**, *to stand*—stability, establish, stagnant, state, station, statue, statute, stationary, stationery, statistics, stature, constant, distant, obstacle, substantial, armistice, institute, superstition.
**stringo, strictum**, *to draw tight*—stringent, astringent, strict, restrict, restraint, stricture.
**struo, structum**, *to build*—structure, construct, construe, destroy, destruction, obstruction.
**stupeo**, *to be senseless*—stupid, stupefy, stupefaction, stupendous.
**suadeo, suasum**, *to advise*—suasion, dissuade, persuasion.
**suavis**, *sweet*—suave, suavity, assuage.
**summus**, *highest*, sum, summit, summary, consummate.
**sumo, sumptum**, *to take*—assume, consumption, presumptuous.
**surgo, surrectum**, *to rise*—surge, insurgent, resurrection, source.

**Tabula**, *a board, table*—table, tablet, tabulate, entablature.
**taceo, tacitum**, *to be silent*—tácit, taciturn, reticence.
**tango, tactum**, *to touch*—tangent, tangible, tact, contact, contagious, contiguous, attach, attain.
**tego, tectum**, *to cover*—tegument, detect, protect.
**temno, temptum**, *to scorn, despise*—contemn, contempt, contemptible.
**tempero**, *to moderate*—temper, temperate, temperance, temperature.
**tempus, temporis**, *time, season*; **tempestas**, *storm*—temporal, temporary, tense, contemporary, extempore, tempest, tempestuous.
**tendo, tensum, tentum**, *to stretch*—tend, tense, tension, tensor, tendon, tent, attend, superintend, ostentatious, extensive.
**teneo, tentum**, *to hold*—tenable, tenant, tenacious, tenement, tenet, tenure, abstain, contain, abstinence, continent, sustentation.
**tento**, *to try*—tempt, temptation, attempt.
**tenuis**, *thin*—tenuity, attenuated, extenuate.

**terminus**, *an end, boundary*—term, terminal, terminate, determine, interminable, exterminate.
**tero, tritum**, *to rub*—trite, triturate, attrition, contrite, detriment.
**terra**, *the earth*—terrace, terreen, terrestrial, terrier, territory, inter, subterranean.
**terreo**, *to frighten*—terror, terrible, terrify, deter.
**testis**, *a witness*—test, testament, testify, testimonial, testator, attest, protest, protestation.
**texo, textum**, *to weave*—text, texture, context, pretext.
**timeo**, *to fear*—timid, timorous, intimidate.
**tollo**, *to lift up, to bear*—extol, tolerate, tolerable.
**tonus**, *a sound*—tone, tune, astonish, detonate, intone, monotonous.
**torqueo, tortum**, *to twist*—torsion, tortoise, tortuous, torture, distort, retort, torment.
**totus**, *all*—total, totality, factotum.
**torreo, tostum**, *to dry, to burn*—torrent, torrid, toast.
**traho, tractum**, *to draw*—tract, tractable, traction, trace, abstract, subtract, retire, train, trait.
**tremo**, *to shake*—tremble, tremor, tremulous, tremendous.
**tres, tria**, *three*—treble, triple, triangle, trio, trident, trinity.
**tribuo, tributum**, *to give, to pay*—tribute, attribute, contribute, distribution.
**trudo, trusum**, *to thrust*—intrude, protrude, abstruse, obtrusive.
**tueor, tuitus**, *to look to*—tuition, tutor, tutelary, intuitive.
**tumeo**, *to swell*—tumid, tumor, tumult, tumultuous, tumulus, tuber, tubercle, protuberance, truffle.
**turba**, *a crowd, bustle*—turbid, turbulent, disturb, perturbation.

**Ulter**, *beyond;* ulterior, *farther;* **ultimus**, *last*—ulterior, ultimate, penult, antepenult.
**umbra**, a *shade*—umbrage, umbrageous, umbrella, adumbrate.
**unda**, *a wave*—undulate, inundate, abound, abundant, redound, redundant.
**unguo, unctum**, *to smear, to anoint*—unguent, unction, unctuous, ointment.
**unus**, *one*—unit, union, unite, uniform, unicorn, unanimous, unison.
**urbs**, *a city*—urban, urbane, urbanity, suburb, suburban.
**uro, ustum**, *to burn*—combustion, combustible.
**utor, usus**, *to use*—useful, usual, usage, usury, abuse, disuse, utensil, utility, utilise, inure.

**Vacca**, *a cow*—vaccine, vaccination.
**vaco, vacatum**, *to be empty*—vacant, vacancy, vacation, vacuity, evacuate.
**vado**, *to go*—evade, invade, pervade, invasion, wade.
**vagus**, *wandering*—vague, vagabond, vagrant, vagary, extravagant.
**valeo**, *to be strong, to be worth*—valid, valiant, valour, valetudinarian, valediction, prevail, prevalent, value.
**vapor**, *steam*—vapid, vapour, evaporate, evaporation.
**varius**, *various*—vary, variety, variable, variegate.
**vastus**, *waste*—vast, waste, devastation.

**veho, vectum,** *to carry*—vehicle, conveyance, inveigh, invective, veterinary (for *veheterinary*, relating to beasts of burden).
**vello, vulsum,** *to pull*—convulse, revulsion.
**velox, velocis,** *swift*—velocity, velocipede.
**velum,** *a covering*—veil, reveal, revelation.
**venio, ventum,** *to come*—advent, adventure, convent, prevent, convenient, avenue, revenue, covenant.
**verbum,** *a word*—verb, verbal, verbosity, adverb, proverbial.
**vermis,** *a worm*—vermin, vermicular, vermilion, vermicelli.
**verto, versum,** *to turn*—verse, version, versatile, avert, convert, divert, diversion, adversity, conversation, universal, inadvertent, advertisement.
**verus,** *true*—very, verity, veracity, verdict.
**vestis,** *a garment*—vest, vestment, vesture, invest, divest.
**via,** *a way*—deviate, devious, obviate, obvious, impervious, trivial, convey, convoy.
**vicis,** *instead of*—vicar, vicissitude, vicegerent, viceroy, viscount.
**video, visum,** *to see*—visage, vision, visible, visit, evident, provide, provision, survey, supervise.
**vigeo,** *to grow*—vigour, vigorous, invigorate.
**vigil,** *watchful*—vigils, vigilant, vigilance.
**villa,** *a country house*—villa, village, villain, villainy, villainous.
**vinco, victum,** *to conquer*—invincible, victory, convince, convict, province, vanquish.
**vindico,** *to lay claim to*—vindicate, vindictive, vengeance, avenge.
**vir,** *a man*—virile, virago, triumvir, virtue, virtuous.
**vireo,** *to be green*—verdant, verdure.
**vita,** *life*—vital, vitality.
**vitium,** *a fault*—vice, vicious, vitiate, vituperate.
**vitrum,** *glass*—vitreous, vitrify, vitriol.
**vivo, victum,** *to live*—vivid, viviparous, revive, convivial, victuals.
**voco, vocatum,** *to call;* **vox, vocis,** *the voice*—vocal, vocative, vocation, voice, vowel, invoke, provoke, provocation, advocate, equivocal.
**volo,** *to wish*—voluntary, volition, benevolent, malevolence.
**volvo, volutum,** *to roll*—volume, voluble, revolve, revolution.
**voro,** *to devour*—voracious, devour, carnivorous.
**votum,** *a vow*—vote, votary, devote, devout, devotee.
**vulgus,** *the people*—vulgar, promulgate, divulge.

## GREEK ROOTS.

**Aer,** *air*—aerolite, aerology, aerometer, aeronaut.
**ago,** *to lead*—demagogue, pedagogue, synagogue, stratagem.
**agon,** *contest*—agony, agonise, antagonist.
**ake, akme,** *point;* **akros,** *highest*—acme, acrobat, acropolis.
**akouo,** *to hear*—acoustics.
**allos,** *other*—parallel, parallelogram.
**anemos,** *the wind*—anemone, anemometer.
**angello,** *to deliver a message*—angel, evangelist.
**angkos,** *a bend*—anchor, ankle, anklet.
**anthos,** *a flower*—anther, anthology, polyanthus.

**anthropos**, *a man*—anthropology, anthropophagi, misanthrope.
**archo**, *beginning, power*—arch (chief), archangel, archbishop, archaic, archæology, monarch, patriarch.
**aristos**, *best*—aristocracy.
**arithmos**, *number*—arithmetic, logarithm.
**arktos**, *a bear*—Arctic, Antarctic.
**astron**, *a star*—astronomy, astrology, disaster.
**athletes**, *a contender*—athlete, athletic.
**atmos**, *air*—atmosphere, atmospheric.
**aule**, *a pipe*—hydraulic.
**autos**, *self*—autobiography, autocrat, autograph, automaton, authentic.

**Ballo**, *to throw*—emblem, problem, symbol, hyperbole, parable.
**bapto**, *to dip in water*—baptise, baptism, anabaptist.
**baros**, *weight*—barometer.
**basis**, *bottom*—base, basis, basement, abase, debase.
**biblion**, **biblos**, *a book*—bible, bibliography, bibliopole.
**bios**, *life*—biography, biology, amphibious.
**botane**, *plant*—botany, botanist.
**brachion**, *the arm*—brace, bracelet, bracket, embrace.
**bronchos**, *the windpipe*—bronchial, bronchitis.

**Chao**, *to gape*—chaos, chaotic, chasm.
**charasso**, *to engrave*—character, characteristic.
**charis**, *grace*—charity, eucharist.
**cheir**, *the hand*—chirography, chirology, chirurgeon (now *surgeon*).
**chloros**, *pale green*—chlorine, chloric, chloride, chlorite, chloroform.
**chole**, *bile*—choler, choleric, melancholy.
**chorus**, *a band of singers*—chorus, choral, chorister, choir.
**christos**, *anointed*—Christ, Christian, Christendom.
**chroma**, *colour*—chromatic, chromo-lithograph.
**chronos**, *time*—chronic, chronology, chronometer, anachronism.
**chrysos**, *gold*—chrysalis, chrysanthemum, chrysolite.

**Damao**, *to break*—adamant, diamond.
**deka**, *ten*—decade, decalogue, decagon.
**demos**, *the people*—democracy, demagogue, epidemic.
**dendron**, *a tree*—dendrology, rhododendron.
**derma**, *the skin*—dermal, dermatology, epidermis, pachydermatous.
**dogma**, *doctrine*; **doxa**, *opinion, glory*—dogmatic, doxology, heterodox, orthodox.
**dynamis**, *power*—dynamics, dynasty.

**Eidos**, *that which is seen, form*—idol, idolatry, metalloid, spheroid, idea, kaleidoscope.
**electron**, *amber*—electricity, electrotype.
**epos**, *a word*—epic, orthoepy.
**eremos**, *a desert*—eremite, hermit.
**ergon**, *work*—energy, energetic, organ, georgic, liturgy.
**ethnos**, *a nation*—ethnography, ethnology.
**ethos**, *custom*—ethics.

**etymos**, *true*—etymology.
**eu**, *well*—eulogy, euphony.

**Gamos**, *marriage*—bigamy, polygamy.
**gaster**, *the belly*—gastric, gastronomy.
**ge**, *the earth*—geography, geology, geometry, georgic.
**genos**, *kind*; **gennao**, *to produce*—genealogy, genesis, oxygen, hydrogen, nitrogen, heterogeneous, homogeneous, cosmogony, theogony.
**gignosko**, **gnonai**, *to know*—gnomon, Gnostic, prognosticate, diagnosis, physiognomy.
**glossa**, **glotta**, *a tongue*—gloss, glossary, epiglottis, polyglot.
**glykys**, *sweet*—glycerine, liquorice.
**glypho**, *to carve*—hieroglyphics.
**gonia**, *corner, angle*—diagonal, hexagon, polygon, trigonometry.
**gramma**, *a writing, a letter*—grammar, diagram, monogram, telegram.
**grapho**, *to write*—graphic, autograph, biography, lithography, photograph, telegraph.
**gymnos**—gymnastic, gymnasium.

**Haireo**, *to take*—heresy, heretic, diæresis.
**hekaton**, *a hundred*—hecatomb, hectare, hectolitre, hectometre, hectogram.
**hemera**, *a day*—ephemeral.
**hemi**, *half*—hemisphere.
**hepta**, *seven*—heptarchy, heptagon.
**heteros**, *different*—heterogeneous, heterodox.
**hex**, *six*—hexagon, hexameter.
**hieros**, *sacred*—hierarchy, hieroglyphics.
**hippos**, *a horse*—hippodrome, hippophagous, hippopotamus.
**histemi**, *to place*—system, systematic.
**histor**, *knowing, learned*—history, story.
**hodos**, *a way*—method, period, synod, exodus, episode.
**holos**, *all, whole*—holocaust, holograph, catholic.
**homos**, *same, similar*—homogeneous, homologate, homeopathy.
**horao**, *to see*; **horama**, *a view*—diorama, panorama.
**hydor**, *water*—hydra, hydrant, hydraulic, hydrogen, hydrography, hydropathy, hydrophobia, hydrostatics.

**Ichthys**, *a fish*—ichthyology.
**idios**, *peculiar*—idiom, idiot, idiosyncrasy.
**isos**, *equal*—isosceles, isothermal.

**Kaio**, **kauso**, *to burn*—caustic, cauterise, holocaust.
**kakos**, *bad*—cacography, cacophony.
**kalos**, *beautiful*—caligraphy, calotype, kaleidoscope.
**kalypto**, *to cover*—apocalypse, apocalyptic.
**kanna**, *a reed*—cannon, canon, canonise.
**kentron**, *a point*—centre, centric, eccentric.
**kephale**, *the head*—cephalic, hydrocephalus.
**kleros**, *a lot*—cleric, clerk, clergy.

**kosmos**, *order, beauty, the world*—cosmogony, cosmopolitan, microcosm, cosmetic.
**kratos**, *rule*—aristocracy, autocracy, democracy.
**kyklos**, *a circle*—cycle, cyclone, cyclopedia.

**Lambano**, **labo**, **lepsomai**, *to take, to seize*—syllable, syllabus, epilepsy.
**laos**, *the people*—lay, laity, lewd, liturgy.
**latreia**, *worship*—idolatry.
**lego**, *to speak, to choose*—dialect, eclectic, elegy, lexicon.
**leipo**, *to leave*—eclipse, ecliptic, ellipse, elliptic.
**lepis**, *a scale*—leper, leprous, leprosy.
**lethe**, *forgetfulness*—lethargy, lethargic.
**lithos**, *a stone*—lithography, aerolite, meteorolite.
**litra**, *a pound*—litre, hectolitre.
**logos**, *a word, discourse*—logic, logarithm, catalogue, dialogue, decalogue, analogy, geology, philology, theology.
**lysis**, *a loosening*—analysis, paralysis, palsy.

**Mania**, *madness*—maniac, biblomaniac, monomaniac.
**manthano**, *to learn*; **mathema**, *science*—mathematics.
**mechane**, *an artificial means*—machine, mechanic, mechanism.
**melos**, *a song*—melody, melodrama.
**meter**, *a mother*—metropolis, metropolitan.
**metron**, *a measure*—metre, chronometer, geometry, symmetry.
**mikros**, *little*—microcosm, microscope.
**mimos**, *one who imitates*—mime, mimic, pantomime.
**misos**, *hatred*—misanthrope, misogamist.
**mnaomai**, *to remember*—mnemonics, amnesty.
**monos**, *alone*—monad, monarch, monastery, monk, monogram, monolith, monologue, monopoly, monotone.
**morphe**, *shape*—metamorphic, metamorphosis.
**mythos**, *a fable*—myth, mythology.

**Naus**, *a ship*—nausea, nautical, aeronaut, Argonaut.
**nekros**, *dead*—necrology, necromancy, necropolis.
**neos**, *new*—neology, neophyte.
**nomos**, *a law*—antinomian, astronomy, autonomy, economy.

**Ode**, *a song*—ode, comedy, melody, monody, parody, psalmody.
**oikeo**, *to dwell*; **oikos**, *a dwelling*—diocese, economy, parochial, parish.
**oligos**, *few*—oligarchy.
**onoma**, *a name*—anonymous, synonymous, patronymic.
**optomai**, *to see*; **ophthalmos**, *the eye*—optics, synoptic, ophthalmia.
**ornis**, **ornithos**, *a bird*—ornithology.
**orthos**, *right*—orthodox, orthoepy, orthography.
**oxys**, *sharp*—oxide, oxygen, paroxysm.

**Pais**, **paidos**, *a child*; **paideia**, *learning*—paideutics, pedagogue, pedant, cyclopedia.
**pachys**, *thick*—pachydermatous.
**pan**, *all, whole*—panoply, panorama, pantheon, pantomime.

**pathos**, *feeling*—pathos, pathetic, pathology, apathy, sympathy.
**pente**, *five*—pentecost, pentateuch, pentagon.
**petra**, *a rock*—petrify, petrifaction, petroleum.
**phago**, *to eat*—esophagus, sarcophagus, hippophagy.
**phaino**, *to bring to light*—diaphonous, phenomenon, plantasm, phantom, phantasmagoria.
**pharmakon**, *a drug*—pharmacy, pharmaceutical, pharmacopœia.
**phemi**, *to speak*—prophet, prophecy, emphasis, emphatic.
**phero**, *to carry*—metaphor, phosphorus.
**philos**, *a lover*—philanthropy, philology, philosophy.
**phobos**, *fear*—hydrophobia.
**phone**, *a sound*—phonic, phonetic, phonography, euphony, symphony.
**phos, photos**, *light*—phosphorescence, photograph.
**phrasis**, *a form of speech*—phrase, phraseology, paraphrase, periphrasis.
**phren**, *the mind*—frenzy, frantic, phrenology.
**phthongos**, *sound*—diphthong, triphthong.
**physis**, *nature*—physic, physician, physics, physiognomy, physiology.
**phyton**, *a plant*—phytology, zoophyte.
**pipto**, *to fall*—symptom, symptomatic.
**planetes**, *a wanderer*—planet.
**pneuma**, *air*—pneumatic.
**poieo**, *to make*—poet, poesy, onomatopœia.
**poleo**, *to sell*—bibliopole, monopoly.
**polis**, *a city*—metropolis, police, polite.
**polys**, *many*—polygamy, polygon, polysyllable, polytechnic.
**poros**, *a passage*—pore, porous.
**pous, podos**, *the foot*—antipodes, polypus, tripod.
**prasso, pratto**, *to do;* **praktike**, *a doing*—practice, practise, practical, practitioner, pragmatic.
**presbyteros**, *elder*—presbyter, priest.
**protos**, *first*—protomartyr, prototype.
**psallo**, *to twang on a stringed instrument, to sing*—psalm, psalter.
**psyche**, *soul*—psychology, metempsychosis.
**pyr**, *fire*—pyre, pyrotechny, pyramid.

**Rheo**, *to flow*—rhetoric, catarrh, diarrhœa, rheumatism.
**rhodon**, *a rose*—rhododendron.

**Sarx, sarkos**, *flesh*—sarcophagus, sarcasm.
**schizo**, *to cut;* **schisma**, *division*—schism, schismatic.
**schole**, *leisure*—school, scholar, scholium.
**skeptomai**, *to look about, to consider*—sceptic, scepticism.
**skopeo**, *to see*—scope, microscope, telescope, episcopal, bishop.
**sophos**, *wise*—sophist, philosopher, unsophisticated.
**sphaira**, *a ball, sphere*—sphere, spheroid, atmosphere, hemisphere.
**stasis**, *a standing*—apostacy, ecstacy, statics, hydrostatics.
**stello**, *to send*—apostle, epistle, epistolary.
**stereos**, *solid*—stereoscope.
**stethos**, *the breast*—stethoscope.
**stichos**, *order, verse*—acrostic, distich.
**stratos**, *an army*—stratagem, strategy.
**strophe**, *a turning*—strophe, antistrophe, apostrophe, catastrophe.

**Taphos**, *a tomb*—epitaph, cenotaph.
**tasso**, *to arrange*; **taxis**, *order*—tactics, syntax.
**techne**, *art*—technical, technology, polytechnic, pyrotechnic.
**tele**, *at a distance*—telegraph, telescope.
**tetra**, *four*—tetrarch, tetragon.
**theos**, *god*—theism, atheism, theocracy, theology, apotheosis.
**thermos**, *hot*—thermal, isothermal, thermometer.
**tithemi**, *to place*; **thesis**, *a placing*—theme, thesis, anathema, antithesis, hypothesis, parenthesis.
**tomos**, *a cutting*—tome, atom, anatomy, epitome.
**topos**, *a place*—topic, topography.
**toxikon**, *poison*—toxicology, intoxicate.
**treis**, **tri**, *three*—tripod, triphthong.
**tropos**, *a turning*—tropics, trope, trophy, heliotrope.
**typho**, *to burn*—typhus, typhoid.
**typos**, *a type*—type, typography, stereotype.
**tyrannos**, *a master*—tyrant, tyranny.

**Zeo**, *to boil*; **zelos**, *great desire*—zeal, zealot, zealous.
**zoon**, *an animal*—zoology, zoophyte, zodiac.

THE END.

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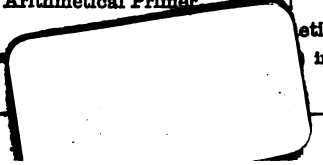

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